42-045-00070

JAN 31 2017

Monroe Energy, LLC
4101 Post Road
Trainer, PA 19061
(610) 364-8000

January 26, 2017

FedEx: 7781 3786 6068

Mr. James Rebarchak
Air Quality Program
Commonwealth of Pennsylvania
Department of Environmental Protection
2 East Main Street
Norristown, PA 19401

Re: Monroe Energy, LLC – Trainer Refinery
40 CFR 60, Subpart J and Ja Semiannual Compliance Report
Reporting Period: July 1 – December 31, 2016
Title V Operating Permit No. 23-00003

Dear Mr. Rebarchak:

In accordance with 40 CFR 60, Subparts J and Ja, Monroe Energy, LLC's Trainer Refinery hereby submits this semi-annual compliance report.

Should you have any questions or comments regarding this report, please contact me at (610) 364-8399.

Sincerely,

Matthew Torell, P.E.
Environmental Leader

Enclosure

cc: Office of Air Enforcement & Compliance Assistance (3AP20)
U.S. EPA, Region III
1650 Arch Street
Philadelphia, Pa 19103-2029
Fedex: 7781 3877 1266

Monroe Energy, LLC
4101 Post Road
Trainer, PA 19061
(610) 364-8000

Responsible Official Certification

Based upon information and belief formed after a reasonable inquiry, I, as a responsible official of the above-mentioned facility, certify the information contained in this report is accurate and true to the best of my knowledge.

Jeffrey K. Warmann,
CEO & President

Attachment 1: Facility Applicability

NSPS Subpart J

Fluid Catalytic Cracking Unit (FCCU)

The FCCU (Source ID 101) is subject to NSPS Subpart J. The FCC control devices include a CO Boiler, an Enhanced Selective Non-Catalytic Reduction Unit (ENSCR), an electrostatic precipitator, and a wet gas scrubber (WGS). In accordance with Subpart J, the WGS is equipped with a CEMS to measure CO and SO_2.

On November 22, 2005, the facility received approval from U.S. EPA for an Alternative Monitoring Plan (AMP) for Opacity in lieu of the requirement to install and operate a Continuous Opacity Monitoring (COM) System on the FCCU WGS stack. The AMP requires the refinery to monitor WGS liquid-to-gas (L-to-G) ratio (must be above 0.08) to continuously demonstrate compliance with the limits established during performance testing conducted in 2006 and 2007.

- **CMS Data:**

See Attachment 2 for a summary of the CMS downtime and excess emissions data in accordance with 40 CFR 60.7 (c)-(d) for this reporting period. As required by 40 CFR 104(c)(4)(vi), the results of the daily drift tests are included in Attachment 5 for the SO_2 analyzer.

- **Excess Emissions Reporting:**

Refer to Attachment 3 for details. There were no excess emissions/limit exceedances for CO and SO_2 from the FCCU. The L-to-G ratio remained above the minimum ratio of 0.08 established during the 2007 performance test for the entire reporting period.

NSPS Subpart Ja

Main Flare

Monroe Energy operates a Main Flare (Source ID 103) that became subject to NSPS Ja on November 11, 2015. This flare is equipped with a flare gas recovery unit (FGRU). On February 12, 2016, the refinery experienced its fifth water seal pressure exceedance. Therefore, Monroe Energy had 180 days to install continuous monitoring equipment (i.e. flow, total reduced sulfur (TRS), H_2S). The monitoring systems were installed and certified according to 40 CFR 60.107a(e) and (f) by August 12, 2016. Therefore, on August 12, 2016 the refinery switched from the Water Seal Pressure Monitoring to the continuous flare gas monitoring compliance option per NSPS Ja requirements. Certification/Audit details for the H_2S monitor that was used for compliance prior to August 12, 2016 is still included in this report for reference.

- **CMS Data:**

See Attachment 2 for a summary of the H_2S and TRS CMS downtime and excess emissions data in accordance with 40 CFR 60.7 (c)-(d) for this reporting period. There were exceedances of the 162 ppm H_2S on a 3-Hr average limit. However, the exceedances are not a violation of the standard because of the NSPS Ja process upset gas exemption. Per 40 CFR 60.103a(h),"combustion of process upset gases released to the flare as a result of relief valve leakage or other emergency malfunction is exempt from this limit." These time periods are reported for clarity.

- **Reportable Discharges per 60.108a(c)(6):**

There were no reportable discharges that occurred during this reporting period.

Sulfur Recovery Unit (SRU)

Monroe Energy operates two Claus sulfur recovery units. These units are permitted as Source 102 (Claus Sulfur Recovery Plant) in the facility's Title V Permit. The SRU became subject to NSPS Ja in 4Q15 when the vent from the Sour Water Storage Tank was routed from the Sour Gas flare (which was subsequently shut down) to the SRU incinerator. The SRU is equipped with a CEMS to measure SO_2 and O_2. There were no deviations from any limits during the reporting period.

- **CMS Data:**

See Attachment 2 for a summary of the CMS downtime and excess emissions data in accordance with 40 CFR 60.7 (c)-(d) for this reporting period.

- **Reportable Discharges per 60.108a(c)(6):**

There were no reportable discharges that occurred during this reporting period.

Fuel Gas System

Monroe Energy operates two fuel gas systems subject to NSPS Ja. The fuel gas systems include the North Side Fuel Gas System and the South Side Fuel Gas System. In accordance with Subpart Ja, each fuel gas system is equipped with a CMS system for measuring the concentration of H_2S in the fuel gas before being burned in any combustion device. There were no deviations from any limits during the reporting period.

- **CMS Data:**

See Attachment 2 for a summary of the CMS downtime and excess emissions data in accordance with 40 CFR 60.7 (c)-(d) for this reporting period.

- **Reportable Discharges per 60.108a(c)(6):**

There were no reportable discharges for either of the fuel gas systems during this reporting period.

CMS Certification/Audit Details for all applicable sources can be found in Attachment 4. The refinery conducted Relative Accuracy Test Audits (RATAs) CEMS in June 2016. All data collected indicates that the CEMS passed their RATAs. The final RATA results are also provided in Attachment 4.

Attachment 2: Excess Emission and Monitoring System Performance Summary Report

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): SO_2 NO_x TRS H_2S (CO) Opacity

Reporting period dates: From **July 1, 2016** to **December 31, 2016**

Company: **Monroe Energy, LLC**

Emission Limitation: **500 ppm (1-hour average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **Servomex**

Model No.: **04900C1-4202**

Date of Latest CMS Certification or Audit: **12/22/2016 (Linearity Test)**

Process Unit(s) Description: **FCCU**

Total source operating time in reporting period [1]: **3968.25 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
a. Startup/shutdown	2	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-Monitor equipment malfunctions	3
c. Process problems	0	c. Quality assurance calibration	201
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	204
3. Total duration of excess emissions x (100) / [Total source operating time]	0.05 %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	5.1 %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted. **See Attachment 3 for excess emissions information.**

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

Downtime Events - Duration

Plant: MONROE ENERGY, LLC.
Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59
Time Online Criteria: 1 minute(s)

Source: FCCSTACK
Parameter: COPPMC0
Interval: 001H

Incident ID	Start Date/Time	End Date/Time	Duration (hours)	Reason Code - Description Action Code - Description
1	07/01/2016 05:00	07/01/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
2	07/02/2016 05:00	07/02/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
3	07/03/2016 05:00	07/03/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
4	07/03/2016 09:00	07/03/2016 09:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
5	07/04/2016 05:00	07/04/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
6	07/05/2016 05:00	07/05/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
7	07/05/2016 07:00	07/05/2016 07:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
8	07/06/2016 05:00	07/06/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
9	07/07/2016 05:00	07/07/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
10	07/08/2016 05:00	07/08/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
11	07/09/2016 05:00	07/09/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
12	07/10/2016 05:00	07/10/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
13	07/11/2016 05:00	07/11/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
14	07/12/2016 05:00	07/12/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
15	07/13/2016 05:00	07/13/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
16	07/14/2016 05:00	07/14/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
17	07/15/2016 05:00	07/15/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
18	07/16/2016 05:00	07/16/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
19	07/17/2016 05:00	07/17/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
20	07/18/2016 05:00	07/18/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION

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Incident ID	Start Date/Time	End Date/Time	Duration (hours)	Reason Code - Description Action Code - Description
21	07/19/2016 05:00	07/19/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
22	07/20/2016 05:00	07/20/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
23	07/21/2016 05:00	07/21/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
24	07/22/2016 05:00	07/22/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
25	07/23/2016 05:00	07/23/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
26	07/24/2016 05:00	07/24/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
27	07/25/2016 05:00	07/25/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
28	07/26/2016 05:00	07/26/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
29	07/27/2016 05:00	07/27/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
30	07/28/2016 05:00	07/28/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
31	07/29/2016 05:00	07/29/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
32	07/30/2016 05:00	07/30/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
33	07/31/2016 05:00	07/31/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
34	08/01/2016 05:00	08/01/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
35	08/02/2016 05:00	08/02/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
36	08/03/2016 05:00	08/03/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
37	08/04/2016 05:00	08/04/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
38	08/05/2016 05:00	08/05/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
39	08/06/2016 05:00	08/06/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
40	08/07/2016 05:00	08/07/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION

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Downtime Events - Duration

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Source: FCCSTACK
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Incident ID	Start Date/Time	End Date/Time	Duration (hours)	Reason Code - Description Action Code - Description
41	08/08/2016 05:00	08/08/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
42	08/09/2016 05:00	08/09/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
43	08/10/2016 05:00	08/10/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
44	08/11/2016 05:00	08/11/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
45	08/12/2016 05:00	08/12/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
46	08/13/2016 05:00	08/13/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
47	08/14/2016 05:00	08/14/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
48	08/15/2016 05:00	08/15/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
49	08/16/2016 05:00	08/16/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
50	08/17/2016 05:00	08/17/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
51	08/18/2016 05:00	08/18/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
52	08/18/2016 07:00	08/18/2016 07:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
53	08/19/2016 05:00	08/19/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
54	08/20/2016 05:00	08/20/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
55	08/21/2016 05:00	08/21/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
56	08/22/2016 05:00	08/22/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
57	08/22/2016 08:00	08/22/2016 08:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
58	08/23/2016 05:00	08/23/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
59	08/24/2016 05:00	08/24/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
60	08/25/2016 05:00	08/25/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION

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Downtime Events - Duration

Plant: MONROE ENERGY, LLC.
Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59
Time Online Criteria: 1 minute(s)

Source: FCCSTACK
Parameter: COPPMC0
Interval: 001H

Incident ID	Start Date/Time	End Date/Time	Duration (hours)	Reason Code - Description Action Code - Description
61	08/26/2016 05:00	08/26/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
62	08/26/2016 07:00	08/26/2016 07:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
63	08/27/2016 05:00	08/27/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
64	08/28/2016 05:00	08/28/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
65	08/29/2016 05:00	08/29/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
66	08/30/2016 05:00	08/30/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
67	08/31/2016 05:00	08/31/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
68	09/01/2016 05:00	09/01/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
69	09/02/2016 05:00	09/02/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
70	09/03/2016 05:00	09/03/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
71	09/03/2016 07:00	09/03/2016 07:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
72	09/04/2016 05:00	09/04/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
73	09/05/2016 05:00	09/05/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
74	09/06/2016 05:00	09/06/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
75	09/07/2016 05:00	09/07/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
76	09/07/2016 08:00	09/07/2016 08:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
77	09/07/2016 10:00	09/07/2016 15:59	6.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
78	09/08/2016 05:00	09/08/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
79	09/09/2016 05:00	09/09/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
80	09/10/2016 05:00	09/10/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION

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Time Online Criteria: 1 minute(s)

Source: FCCSTACK
Parameter: COPPMC0
Interval: 001H

Incident ID	Start Date/Time	End Date/Time	Duration (hours)	Reason Code - Description Action Code - Description
81	09/11/2016 05:00	09/11/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
82	09/12/2016 05:00	09/12/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
83	09/13/2016 05:00	09/13/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
84	09/13/2016 08:00	09/13/2016 08:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
85	09/14/2016 05:00	09/14/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
86	09/15/2016 05:00	09/15/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
87	09/15/2016 07:00	09/15/2016 07:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
88	09/16/2016 05:00	09/16/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
89	09/17/2016 05:00	09/17/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
90	09/18/2016 05:00	09/18/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
91	09/19/2016 05:00	09/19/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
92	09/20/2016 05:00	09/20/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
93	09/21/2016 05:00	09/21/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
94	09/22/2016 05:00	09/22/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
95	09/23/2016 05:00	09/23/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
96	09/23/2016 08:00	09/23/2016 08:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
97	09/24/2016 05:00	09/24/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
98	09/25/2016 05:00	09/25/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
99	09/26/2016 05:00	09/26/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
100	09/27/2016 05:00	09/27/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION

* Indicates duration incident could have additional data prior to the start date or following the end date.

Downtime Events - Duration

Plant: MONROE ENERGY, LLC.
Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59
Time Online Criteria: 1 minute(s)

Source: FCCSTACK
Parameter: COPPMC0
Interval: 001H

Incident ID	Start Date/Time	End Date/Time	Duration (hours)	Reason Code - Description Action Code - Description
101	09/27/2016 07:00	09/27/2016 08:59	2.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
102	09/28/2016 05:00	09/28/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
103	09/29/2016 05:00	09/29/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
104	09/30/2016 05:00	09/30/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
105	09/30/2016 08:00	09/30/2016 08:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
106	10/01/2016 05:00	10/01/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
107	10/02/2016 05:00	10/02/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
108	10/02/2016 12:00	10/02/2016 12:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
109	10/03/2016 05:00	10/03/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
110	10/04/2016 05:00	10/04/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
111	10/05/2016 05:00	10/05/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
112	10/06/2016 05:00	10/06/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
113	10/06/2016 09:00	10/06/2016 09:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
114	10/07/2016 05:00	10/07/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
115	10/08/2016 05:00	10/08/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
116	10/09/2016 05:00	10/09/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
117	10/10/2016 05:00	10/10/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
118	10/11/2016 05:00	10/11/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
119	10/11/2016 08:00	10/11/2016 08:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
120	10/12/2016 05:00	10/12/2016 07:59	3.00	08 - NORMAL OPERATION
				11 - EXCESS DRIFT PRIMARY ANALYZER

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Downtime Events - Duration

Plant: MONROE ENERGY, LLC.
Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59
Time Online Criteria: 1 minute(s)

Source: FCCSTACK
Parameter: COPPMC0
Interval: 001H

Incident ID	Start Date/Time	End Date/Time	Duration (hours)	Reason Code - Description Action Code - Description
121	10/13/2016 05:00	10/13/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
122	10/13/2016 08:00	10/13/2016 08:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
123	10/14/2016 05:00	10/14/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
124	10/15/2016 05:00	10/15/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
125	11/03/2016 05:00	11/03/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
126	11/04/2016 05:00	11/04/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
127	11/04/2016 08:00	11/04/2016 08:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
128	11/05/2016 05:00	11/05/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
129	11/06/2016 05:00	11/06/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
130	11/07/2016 05:00	11/07/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
131	11/08/2016 05:00	11/08/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
132	11/09/2016 05:00	11/09/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
133	11/10/2016 05:00	11/10/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
134	11/11/2016 05:00	11/11/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
135	11/12/2016 05:00	11/12/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
136	11/13/2016 05:00	11/13/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
137	11/14/2016 05:00	11/14/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
138	11/15/2016 05:00	11/15/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
139	11/16/2016 05:00	11/16/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
140	11/17/2016 05:00	11/17/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION

* Indicates duration incident could have additional data prior to the start date or following the end date.

Downtime Events - Duration

Plant: MONROE ENERGY, LLC.
Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59
Time Online Criteria: 1 minute(s)

Source: FCCSTACK
Parameter: COPPMC0
Interval: 001H

Incident ID	Start Date/Time	End Date/Time	Duration (hours)	Reason Code - Description Action Code - Description
141	11/18/2016 05:00	11/18/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
142	11/19/2016 05:00	11/19/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
143	11/20/2016 05:00	11/20/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
144	11/21/2016 05:00	11/21/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
145	11/22/2016 05:00	11/22/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
146	11/23/2016 05:00	11/23/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
147	11/23/2016 11:00	11/23/2016 11:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
148	11/24/2016 05:00	11/24/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
149	11/25/2016 05:00	11/25/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
150	11/25/2016 10:00	11/25/2016 10:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
151	11/26/2016 05:00	11/26/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
152	11/27/2016 05:00	11/27/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
153	11/28/2016 05:00	11/28/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
154	11/29/2016 05:00	11/29/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
155	11/29/2016 09:00	11/29/2016 09:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
156	11/29/2016 14:00	11/29/2016 14:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
157	11/30/2016 05:00	11/30/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
158	12/01/2016 05:00	12/01/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
159	12/01/2016 10:00	12/01/2016 10:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
160	12/02/2016 05:00	12/02/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION

* Indicates duration incident could have additional data prior to the start date or following the end date.

Downtime Events - Duration

Plant: MONROE ENERGY, LLC.
Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59
Time Online Criteria: 1 minute(s)

Source: FCCSTACK
Parameter: COPPMC0
Interval: 001H

Incident ID	Start Date/Time	End Date/Time	Duration (hours)	Reason Code - Description Action Code - Description
161	12/03/2016 05:00	12/03/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
162	12/04/2016 05:00	12/04/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
163	12/05/2016 05:00	12/05/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
164	12/05/2016 10:00	12/05/2016 10:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
165	12/06/2016 05:00	12/06/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
166	12/07/2016 05:00	12/07/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
167	12/08/2016 05:00	12/08/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
168	12/09/2016 05:00	12/09/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
169	12/10/2016 05:00	12/10/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
170	12/11/2016 05:00	12/11/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
171	12/12/2016 05:00	12/12/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
172	12/13/2016 05:00	12/13/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
173	12/14/2016 05:00	12/14/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
174	12/15/2016 05:00	12/15/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
175	12/16/2016 05:00	12/16/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
176	12/17/2016 05:00	12/17/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
177	12/18/2016 05:00	12/18/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
178	12/19/2016 05:00	12/19/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
179	12/20/2016 05:00	12/20/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION
180	12/21/2016 05:00	12/21/2016 05:59	1.00	08 - NORMAL OPERATION
				14 - RECALIBRATION

* Indicates duration incident could have additional data prior to the start date or following the end date.

Downtime Events - Duration

Plant: MONROE ENERGY, LLC.
Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59
Time Online Criteria: 1 minute(s)

Source: FCCSTACK
Parameter: COPPMC0
Interval: 001H

Incident ID	Start Date/Time	End Date/Time	Duration (hours)	Reason Code - Description Action Code - Description
181	12/21/2016 13:00	12/21/2016 13:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
182	12/22/2016 05:00	12/22/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
183	12/22/2016 09:00	12/22/2016 10:59	2.00	08 - NORMAL OPERATION 14 - RECALIBRATION
184	12/22/2016 12:00	12/22/2016 14:59	3.00	08 - NORMAL OPERATION 14 - RECALIBRATION
185	12/23/2016 05:00	12/23/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
186	12/24/2016 05:00	12/24/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
187	12/25/2016 05:00	12/25/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
188	12/26/2016 05:00	12/26/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
189	12/27/2016 05:00	12/27/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
190	12/28/2016 05:00	12/28/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
191	12/29/2016 05:00	12/29/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
192	12/30/2016 05:00	12/30/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
193	12/31/2016 05:00	12/31/2016 05:59	1.00	08 - NORMAL OPERATION 14 - RECALIBRATION
		Number of Events:	193	
		Total Duration:	204.00 hours	

* Indicates duration incident could have additional data prior to the start date or following the end date.

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): (SO2) NOx TRS H2S CO Opacity

Reporting period dates: From **July 1, 2016** to **December 31, 2016**

Company: **Monroe Energy, LLC**

Emission Limitation: **50 ppm (7-day rolling average); 25 ppm (365-day rolling average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **AMETEK**

Model No.: **921**

Date of Latest CMS Certification or Audit: **12/22/2016 (Linearity Test)**

Process Unit(s) Description: **FCCU**

Total source operating time in reporting period [1]: **3968.25 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
a. Startup/shutdown	**0**	a. Monitor equipment malfunctions	**0**
b. Control equipment problems	**0**	b. Non-Monitor equipment malfunctions	**60**
c. Process problems	**0**	c. Quality assurance calibration	**10**
d. Other known causes	**0**	d. Other known causes	**0**
e. Unknown causes	**0**	e. Unknown causes	**0**
2. Total duration of excess emissions	**0**	2. Total CMS Downtime	70
3. Total duration of excess emissions x (100) / [Total source operating time]	**0.0** %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	**1.76** %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted. **See Attachment 3 for excess emissions information.**

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): (SO_2) NO_x TRS H_2S CO Opacity

Reporting period dates: From **July 1, 2016** to **December 31, 2016**

Company: **Monroe Energy, LLC**

Emission Limitation: **250 ppm (12 hour rolling average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **AMETEK**

Model No.: **Model 921**

Date of Latest CMS Certification or Audit: **12/15/2016 (Linearity Test)**

Process Unit(s) Description: **Claus Sulfur Recovery Plant**

Total source operating time in reporting period [1]: **4405.77 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
a. Startup/shutdown	0	a. Monitor equipment malfunctions	43
b. Control equipment problems	0	b. Non-Monitor equipment malfunctions	24
c. Process problems	0	c. Quality assurance calibration	6
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	73
3. Total duration of excess emissions x (100) / [Total source operating time]	0.0 %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	1.66 %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted. **See Attachment 3 for excess emissions information.**

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): SO_2 NO_X (TRS) H_2S CO Opacity

Reporting period dates: From **August 12, 2016** to **December 31, 2016**

Company: **Monroe Energy, LLC**

Emission Limitation: **162 ppm (3 hour average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **Thermo**

Model No.: **SOLA II**

Date of Latest CMS Certification or Audit: **12/28/2016 (Linearity Test)**

Process Unit(s) Description: **Main Flare**

Total source operating time in reporting period [1]: **3408 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
f. Startup/shutdown	0	a. Monitor equipment malfunctions	0
g. Control equipment problems	0	b. Non-Monitor equipment malfunctions	0
h. Process problems	0	c. Quality assurance calibration	28
i. Other known causes	0	d. Other known causes	0
j. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	28
3. Total duration of excess emissions x (100) / [Total source operating time]	0.0 %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	0.82 %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted. **See Attachment 3 for excess emissions information.**

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): SO_2 NO_X TRS (**H_2S**) CO Opacity

Reporting period dates: From **July 1, 2016** to **December 31, 2016**

Company: **Monroe Energy, LLC**

Emission Limitation: **162 ppm H2S (3 hour Average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **Applied Automation**

Model No.: **AV4070**

Date of Latest CMS Certification or Audit: **12/13/2016 (Linearity Test)**

Process Unit(s) Description: **North Side Fuel Gas System**

Total source operating time in reporting period [1]: **4415.82 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
f. Startup/shutdown	0	a. Monitor equipment malfunctions	0
g. Control equipment problems	0	b. Non-Monitor equipment malfunctions	69
h. Process problems	0	c. Quality assurance calibration	3
i. Other known causes	0	d. Other known causes	0
j. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	72
3. Total duration of excess emissions x (100) / [Total source operating time]	0.0 %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	1.63 %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): SO_2 NO_x TRS (H_2S) CO Opacity

Reporting period dates: From **July 1, 2016** to **December 31, 2016**

Company: **Monroe Energy, LLC**

Emission Limitation: **162 ppm H2S (3 hour Average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **Applied Automation**

Model No.: **AV4071**

Date of Latest CMS Certification or Audit: **12/12/2016 (Linearity Test)**

Process Unit(s) Description: **South Side Fuel Gas System**

Total source operating time in reporting period [1]: **4415.82**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
k. Startup/shutdown	0	a. Monitor equipment malfunctions	0
l. Control equipment problems	0	b. Non-Monitor equipment malfunctions	14
m. Process problems	0	c. Quality assurance calibration	3
n. Other known causes	0	d. Other known causes	0
o. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	17
3. Total duration of excess emissions x (100) / [Total source operating time]	0.0 %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	0.38 %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): SO_2 NO_X TRS (H_2S) CO Opacity

Reporting period dates: From **July 1, 2016** to **August 12, 2016**

Company: **Monroe Energy, LLC**

Emission Limitation: **162 ppm H2S (3 hour Average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **Emerson Process Management**

Model No.: **Daniel 500 GC**

Date of Latest CMS Certification or Audit: **12/28/2016 (Linearity Test)**

Process Unit(s) Description: **Main Flare**

Total source operating time in reporting period [1]: **1008 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
p. Startup/shutdown	0	a. Monitor equipment malfunctions	0
q. Control equipment problems	0	b. Non-Monitor equipment malfunctions	0
r. Process problems	0	c. Quality assurance calibration	13
s. Other known causes	0	d. Other known causes	0
t. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	13
3. Total duration of excess emissions x (100) / [Total source operating time]	0.0 %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	1.29 %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted. **See Attachment 3 for excess emissions information.**

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): SO_2 NO_X TRS (**H_2S**) CO Opacity

Reporting period dates: From **August 12, 2016** to **December 31, 2016**

Company: **Monroe Energy, LLC**

Emission Limitation: **162 ppm (3 hour average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **ABB**

Model No.: **PGC5000**

Date of Latest CMS Certification or Audit: **12/28/2016 (Linearity Test)**

Process Unit(s) Description: **Main Flare**

Total source operating time in reporting period [1]: **3408 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
k. Startup/shutdown	0	a. Monitor equipment malfunctions	7
l. Control equipment problems	0	b. Non-Monitor equipment malfunctions	0
m. Process problems	3	c. Quality assurance calibration	1
n. Other known causes	0	d. Other known causes	0
o. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	3	2. Total CMS Downtime	8
3. Total duration of excess emissions x (100) / [Total source operating time]	0.1 %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	0.23 %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted. **See Appendix B for excess emissions information.**

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

Attachment 3: Excess Emissions and Emission Limit Exceedances

Source: FCCU
Standard: 500 PPM CO 1-Hr Average Limit

There were no deviations from this standard during the reporting period.

Source: FCCU
Standard: 50 ppm SO_2 (7-day rolling average); 25 ppm SO_2 (365-day rolling average)

There were no deviations from this standard during the reporting period.

Source: SRU
Standard: 250 PPM SO_2 12-Hr Rolling Average Limit

There were no deviations from this standard during the reporting period.

Source: Main Flare
Standard: 162 ppm H_2S 3-Hr Rolling Average Limit

Start	Duration	3 Hr Rolling Average (ppm)	Caused by SSM event?	Nature and Cause of Event	Corrective Action Taken
10/24/16 14:00	3 hours	167.59-245.92	Yes	The D2 Heater experienced low O_2 levels and high skin temperatures. Thus the unit was quickly shutdown and depressurized. This exceeded the flare gas recovery system capacity and resulted in the flaring of waste gas in excess of the 162 ppm limit.	The unit was shut down and depressurized.

Note: This exceedance of the 162 ppm limit is not considered a violation of the standard due to the NSPS Ja process upset gas exemption.

Attachment 4: CEMS Certification/Audit Details

RATA Test - Permit

Plant: TRAN Source: SRUSTACK

Parameter: SO2PPMC
Effective Date/Time: 06/15/2016 17:06
Test Result: **Passed**
Overall RA: 6.90
CEMS Time Offset :
Test Comment:

RA Calc Method: Standard Equation

Operating Level: High
Mean CEMS: 202.55600
Mean Reference: 191.93300
Mean Difference: -10.62200

Relative Accuracy: 6.90
Standard Deviation: 3.40800
Confidence Coefficient: 2.62000

APS Indicator: False
tValue: 2.306
Avg Load:

Run	Started	Ended	Reference Value	CEMS Value	Difference	Load	Use
1	06/15/2016 10:32	06/15/2016 10:52	162.2	171.4	-9.2		Y
2	06/15/2016 11:13	06/15/2016 11:33	165.1	183.2	-18.1		Y
3	06/15/2016 11:46	06/15/2016 12:06	180.6	190.1	-9.5		Y
4	06/15/2016 12:21	06/15/2016 12:41	183.9	195.8	-11.9		Y
5	06/15/2016 12:55	06/15/2016 13:15	199.8	208.7	-8.9		Y
6	06/15/2016 13:28	06/15/2016 13:48	211.9	217.7	-5.8		Y
7	06/15/2016 14:01	06/15/2016 14:21	211.5	221.1	-9.6		Y
8	06/15/2016 14:35	06/15/2016 14:55	213.2	225.9	-12.7		Y
9	06/15/2016 15:13	06/15/2016 15:33	199.2	209.1	-9.9		Y
10	06/15/2016 15:46	06/15/2016 16:06	205.6	233.3	-27.7		

RATA Test - Permit

Plant: TRAN Source: S_H2S

Parameter: S_H2S
Effective Date/Time: 06/20/2016 14:47
Test Result: **PassAPS**
Overall RA: 4.80
CEMS Time Offset :
Test Comment:

RA Calc Method: Emiss Limit Equation
Emission Standard: 162

Operating Level: Normal
Mean CEMS: 32.33300
Mean Reference: 35.44400
Mean Difference: 3.11100

Relative Accuracy: 4.80
Standard Deviation: 6.07500
Confidence Coefficient: 4.67000

APS Indicator: True
tValue: 2.306
Avg Load:

Run	Started	Ended	Reference Value	CEMS Value	Difference	Load	Use
1	06/20/2016 07:56	06/20/2016 08:16	38.4	24.7	13.7		
2	06/20/2016 08:22	06/20/2016 08:42	0.0	24.5	-24.5		
3	06/20/2016 08:49	06/20/2016 09:09	40.7	27.0	13.7		
4	06/20/2016 09:17	06/20/2016 09:37	33.1	27.6	5.5		Y
5	06/20/2016 09:59	06/20/2016 10:19	44.9	31.8	13.1		Y
6	06/20/2016 10:23	06/20/2016 10:43	35.8	31.1	4.7		Y
7	06/20/2016 10:48	06/20/2016 11:08	43.9	33.0	10.9		Y
8	06/20/2016 11:31	06/20/2016 11:51	35.7	35.6	0.1		Y
9	06/20/2016 11:55	06/20/2016 12:15	31.3	32.1	-0.8		Y
10	06/20/2016 12:29	06/20/2016 12:49	36.1	35.4	0.7		Y
11	06/20/2016 12:55	06/20/2016 13:15	25.2	31.4	-6.2		Y
12	06/20/2016 13:27	06/20/2016 13:47	33.0	33.0	0.0		Y

RATA Test - Permit

Plant: TRAN Source: M_FLARE

Parameter: H2SCONC
Effective Date/Time: 06/22/2016 15:41
Test Result: **PassAPS**
Overall RA: 1.42
CEMS Time Offset :
Test Comment:

RA Calc Method: Emiss Limit Equation
Emission Standard: 162

Operating Level: Normal
Mean CEMS: 0.00000
Mean Reference: 2.12200
Mean Difference: 2.12200

Relative Accuracy: 1.42
Standard Deviation: 0.22200
Confidence Coefficient: 0.17100

APS Indicator: True
tValue: 2.306
Avg Load:

Run	Started	Ended	Reference Value	CEMS Value	Difference	Load	Use
1	06/22/2016 09:42	06/22/2016 10:11	1.6	0.0	1.6		Y
2	06/22/2016 10:12	06/22/2016 10:41	2.0	0.0	2.0		Y
3	06/22/2016 10:42	06/22/2016 11:11	2.1	0.0	2.1		Y
4	06/22/2016 11:12	06/22/2016 11:41	2.3	0.0	2.3		Y
5	06/22/2016 11:42	06/22/2016 12:11	2.3	0.0	2.3		Y
6	06/22/2016 12:12	06/22/2016 12:41	2.4	0.0	2.4		
7	06/22/2016 12:42	06/22/2016 13:11	2.3	0.0	2.3		Y
8	06/22/2016 13:12	06/22/2016 13:41	2.2	0.0	2.2		Y
9	06/22/2016 13:42	06/22/2016 14:11	2.2	0.0	2.2		Y
10	06/22/2016 14:12	06/22/2016 14:41	2.1	0.0	2.1		Y

RATA Test - Permit

Plant: TRAN Source: N_H2S

Parameter: N_H2S
Effective Date/Time: 06/21/2016 13:23
Test Result: **PassAPS**
Overall RA: 3.64
CEMS Time Offset :
Test Comment:

RA Calc Method: Emiss Limit Equation
Emission Standard: 162

Operating Level: Normal
Mean CEMS: 29.78900
Mean Reference: 27.55600
Mean Difference: -2.23300

Relative Accuracy: 3.64
Standard Deviation: 4.77400
Confidence Coefficient: 3.67000

APS Indicator: True
tValue: 2.306
Avg Load:

Run	Started	Ended	Reference Value	CEMS Value	Difference	Load	Use
1	06/21/2016 08:01	06/21/2016 08:21	30.9	40.2	-9.3		
2	06/21/2016 08:25	06/21/2016 08:45	40.9	39.4	1.5		Y
3	06/21/2016 08:51	06/21/2016 09:11	30.6	36.8	-6.2		Y
4	06/21/2016 09:18	06/21/2016 09:38	25.2	31.7	-6.5		Y
5	06/21/2016 09:48	06/21/2016 10:08	37.5	29.4	8.1		Y
6	06/21/2016 10:11	06/21/2016 10:31	25.7	29.5	-3.8		Y
7	06/21/2016 10:41	06/21/2016 11:01	21.4	27.9	-6.5		Y
8	06/21/2016 11:07	06/21/2016 11:27	22.2	26.1	-3.9		Y
9	06/21/2016 11:37	06/21/2016 11:57	23.6	23.8	-0.2		Y
10	06/21/2016 12:03	06/21/2016 12:23	20.9	23.5	-2.6		Y

RATA Test - Permit

Plant: TRAN Source: M_FLARE

Parameter: TRS__DRY
Effective Date/Time: 08/05/2016 15:53
Test Result: **PassAPS**
Overall RA: 2.89
CEMS Time Offset :
Test Comment:

RA Calc Method: Emiss Limit Equation
Emission Standard: 162

Operating Level: Normal
Mean CEMS: 36.11100
Mean Reference: 36.43300
Mean Difference: 0.32200

Relative Accuracy: 2.89
Standard Deviation: 5.67700
Confidence Coefficient: 4.36400

APS Indicator: True
tValue: 2.306
Avg Load:

Run	Started	Ended	Reference Value	CEMS Value	Difference	Load	Use
1	08/05/2016 07:49	08/05/2016 08:18	28.4	27.6	0.8		Y
2	08/05/2016 08:27	08/05/2016 08:56	41.7	33.0	8.7		Y
3	08/05/2016 09:04	08/05/2016 09:33	45.8	34.5	11.3		
4	08/05/2016 10:50	08/05/2016 11:19	40.5	41.7	-1.2		Y
5	08/05/2016 11:25	08/05/2016 11:54	32.1	40.4	-8.3		Y
6	08/05/2016 12:03	08/05/2016 12:32	34.1	41.1	-7.0		Y
7	08/05/2016 12:40	08/05/2016 13:09	43.9	40.9	3.0		Y
8	08/05/2016 13:16	08/05/2016 13:45	29.1	31.4	-2.3		Y
9	08/05/2016 13:50	08/05/2016 14:19	40.6	37.8	2.8		Y
10	08/05/2016 14:24	08/05/2016 14:53	37.5	31.1	6.4		Y

RATA Test - Permit

Plant: TRAN Source: M_FLARE

Parameter: H2S__DRY
Effective Date/Time: 08/02/2016 15:50
Test Result: **PassAPS**
Overall RA: 1.77
CEMS Time Offset :
Test Comment:

RA Calc Method: Emiss Limit Equation
Emission Standard: 162

Operating Level: Normal
Mean CEMS: 2.84400
Mean Reference: 0.10000
Mean Difference: -2.74400

Relative Accuracy: 1.77
Standard Deviation: 0.16700
Confidence Coefficient: 0.12800

APS Indicator: True
tValue: 2.306
Avg Load:

Run	Started	Ended	Reference Value	CEMS Value	Difference	Load	Use
1	08/02/2016 09:11	08/02/2016 09:40	0.1	2.7	-2.6		Y
2	08/02/2016 09:45	08/02/2016 10:14	0.1	2.7	-2.6		Y
3	08/02/2016 10:19	08/02/2016 10:48	0.1	2.8	-2.7		Y
4	08/02/2016 10:52	08/02/2016 11:21	0.1	2.7	-2.6		Y
5	08/02/2016 11:28	08/02/2016 11:57	0.1	3.0	-2.9		Y
6	08/02/2016 12:02	08/02/2016 12:31	0.1	3.5	-3.4		
7	08/02/2016 12:37	08/02/2016 13:06	0.1	3.2	-3.1		Y
8	08/02/2016 13:11	08/02/2016 13:40	0.1	2.9	-2.8		Y
9	08/02/2016 13:48	08/02/2016 14:17	0.1	2.8	-2.7		Y
10	08/02/2016 14:21	08/02/2016 14:50	0.1	2.8	-2.7		Y

RATA Test - Permit

Plant: TRAN Source: FCCSTACK

Parameter: SO2PPMC0
Effective Date/Time: 06/14/2016 19:42
Test Result: **PassAPS**
Overall RA: 3.44
CEMS Time Offset :
Test Comment:

RA Calc Method: Difference Equation

Operating Level: High
Mean CEMS: 3.66700
Mean Reference: 6.41100
Mean Difference: 2.74400

Relative Accuracy: 3.44
Standard Deviation: 0.90800
Confidence Coefficient: 0.69800

APS Indicator: True
tValue: 2.306
Avg Load:

Run	Started	Ended	Reference Value	CEMS Value	Difference	Load	Use
1	06/14/2016 09:34	06/14/2016 09:54	5.1	2.7	2.4		Y
2	06/14/2016 10:29	06/14/2016 10:49	6.0	2.6	3.4		Y
3	06/14/2016 11:16	06/14/2016 11:36	6.0	2.6	3.4		Y
4	06/14/2016 12:02	06/14/2016 12:22	5.7	2.5	3.2		Y
5	06/14/2016 12:50	06/14/2016 13:10	6.6	4.2	2.4		Y
6	06/14/2016 13:39	06/14/2016 13:59	7.0	4.3	2.7		Y
7	06/14/2016 14:28	06/14/2016 14:48	7.7	4.6	3.1		Y
8	06/14/2016 15:30	06/14/2016 15:50	8.7	4.7	4.0		
9	06/14/2016 16:23	06/14/2016 16:43	8.7	5.2	3.5		Y
10	06/14/2016 17:25	06/14/2016 17:45	9.9	5.1	4.8		
11	06/14/2016 18:22	06/14/2016 18:42	4.9	4.3	0.6		Y

RATA Test - Permit

Plant: TRAN Source: FCCSTACK

Parameter: COPPMC0
Effective Date/Time: 06/14/2016 19:42
Test Result: **PassAPS**
Overall RA: 0.50
CEMS Time Offset :
Test Comment:

RA Calc Method: Emiss Limit Equation
Emission Standard: 500

Operating Level: High
Mean CEMS: 2.92400
Mean Reference: 0.60000
Mean Difference: -2.32400

Relative Accuracy: 0.50
Standard Deviation: 0.23000
Confidence Coefficient: 0.17700

APS Indicator: True
tValue: 2.306
Avg Load:

Run	Started	Ended	Reference Value	CEMS Value	Difference	Load	Use
1	06/14/2016 09:34	06/14/2016 09:54	0.60	2.79	-2.19		Y
2	06/14/2016 10:29	06/14/2016 10:49	0.60	3.29	-2.69		Y
3	06/14/2016 11:16	06/14/2016 11:36	0.60	2.90	-2.30		Y
4	06/14/2016 12:02	06/14/2016 12:22	0.60	3.13	-2.53		Y
5	06/14/2016 12:50	06/14/2016 13:10	0.60	2.61	-2.01		Y
6	06/14/2016 13:39	06/14/2016 13:59	0.60	3.05	-2.45		Y
7	06/14/2016 14:28	06/14/2016 14:48	0.60	2.87	-2.27		Y
8	06/14/2016 15:30	06/14/2016 15:50	0.60	3.06	-2.46		Y
9	06/14/2016 16:23	06/14/2016 16:43	0.60	2.62	-2.02		Y
10	06/14/2016 17:25	06/14/2016 17:45	0.60	3.36	-2.76		
11	06/14/2016 18:22	06/14/2016 18:42	0.60	3.30	-2.70		

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: S_H2S
Parameter: S_H2S
Instrument Span: 300.000

Test Date/Time: 09/20/16 09:52
Test Result: **Pass**
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
09/20/16 09:14	152.400	157.000	-4.600	-2.9
09/20/16 09:28	154.100	157.000	-2.900	-1.8
09/20/16 09:42	152.800	157.000	-4.200	-2.7

CEMS Mean (Cm): 153.100
Audit Mean (Ca): 157.000
Accuracy (A) in %: -2.5
Mean Difference: -3.9
APS Indicator: 0
Cylinder #: AAL18386
Cylinder Exp. Date: 01/30/2019

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
09/20/16 09:11	266.100	262.000	4.100	1.6
09/20/16 09:23	264.200	262.000	2.200	0.8
09/20/16 09:39	257.800	262.000	-4.200	-1.6

CEMS Mean (Cm): 262.700
Audit Mean (Ca): 262.000
Accuracy (A) in %: 0.3
Mean Difference: 0.7
APS Indicator: 0
Cylinder #: ALM057367
Cylinder Exp. Date: 08/05/2018

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
09/20/16 09:20	8.700	0.000	8.700	
09/20/16 09:32	0.000	0.000	0.000	
09/20/16 09:52	0.000	0.000	0.000	

CEMS Mean (Cm): 2.900
Audit Mean (Ca): 0.000
Accuracy (A) in %:
Mean Difference: 2.9
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: S_H2S
Parameter: S_H2S
Instrument Span: 300.000

Test Date/Time: 12/12/16 10:31
Test Result: **Pass**
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
12/12/16 09:50	148.700	153.000	-4.300	-2.8
12/12/16 10:06	149.800	153.000	-3.200	-2.1
12/12/16 10:24	146.400	153.000	-6.600	-4.3

CEMS Mean (Cm): 148.300
Audit Mean (Ca): 153.000
Accuracy (A) in %: -3.1
Mean Difference: -4.7
APS Indicator: 0
Cylinder #: AALO69628
Cylinder Exp. Date: 03/17/2020

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
12/12/16 09:42	267.200	262.000	5.200	2.0
12/12/16 10:00	269.500	262.000	7.500	2.9
12/12/16 10:20	268.200	262.000	6.200	2.4

CEMS Mean (Cm): 268.300
Audit Mean (Ca): 262.000
Accuracy (A) in %: 2.4
Mean Difference: 6.3
APS Indicator: 0
Cylinder #: ALMO57367
Cylinder Exp. Date: 08/05/2018

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
12/12/16 09:56	1.000	0.000	1.000	
12/12/16 10:12	0.000	0.000	0.000	
12/12/16 10:31	2.700	0.000	2.700	

CEMS Mean (Cm): 1.233
Audit Mean (Ca): 0.000
Accuracy (A) in %:
Mean Difference: 1.2
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: SRUSTACK
Parameter: SO2
System ID:
Component ID:
Span Value: 500.000
Span Scale Code: H

Test End Date/Time: 08/24/16 08:27
Test Number: XML (17-Q3-2016-5) / EDR (5)
Reason for Test: Periodic Quality Assurance
Test Result: **Pass**
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
08/24/16 07:49	276.200	277.900	-1.700	0.6
08/24/16 08:05	276.200	281.700	-5.500	2.0
08/24/16 08:22	276.200	276.000	0.200	0.1

Reference Mean: 276.200
Measured Mean: 278.533
Level Error: 0.8
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #: alm019051
Cylinder Exp. Date: 10/29/2023

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
08/24/16 07:53	489.000	488.800	0.200	0.0
08/24/16 08:10	489.000	491.200	-2.200	0.4
08/24/16 08:27	489.000	490.700	-1.700	0.3

Reference Mean: 489.000
Measured Mean: 490.233
Level Error: 0.3
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #: ALM017305
Cylinder Exp. Date: 10/18/2020

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
08/24/16 07:41	0.000	0.000	0.000	
08/24/16 08:00	0.000	5.700	-5.700	
08/24/16 08:15	0.000	5.900	-5.900	

Reference Mean: 0.000
Measured Mean: 3.867
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: SRUSTACK
Parameter: O2
System ID:
Component ID:
Span Value: 25.000
Span Scale Code: H

Test End Date/Time: 08/24/16 08:50
Test Number: XML (18-Q3-2016-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: **Pass**
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
08/24/16 08:44	13.100	13.100	0.000	0.0
08/24/16 08:45	13.100	13.100	0.000	0.0
08/24/16 08:46	13.100	13.100	0.000	0.0

Reference Mean: 13.100
Measured Mean: 13.100
Level Error: 0.0
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier: A12011
Cylinder #: ALM062568
Cylinder Exp. Date: 01/02/2021

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
08/24/16 08:48	21.400	21.400	0.000	0.0
08/24/16 08:49	21.400	21.400	0.000	0.0
08/24/16 08:50	21.400	21.400	0.000	0.0

Reference Mean: 21.400
Measured Mean: 21.400
Level Error: 0.0
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier: A12011
Cylinder #: ALM021773
Cylinder Exp. Date: 10/20/2023

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
08/24/16 08:40	0.000	0.000	0.000	
08/24/16 08:41	0.000	0.000	0.000	
08/24/16 08:42	0.000	0.000	0.000	

Reference Mean: 0.000
Measured Mean: 0.000
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: SRUSTACK
Parameter: SO2
System ID:
Component ID:
Span Value: 500.000
Span Scale Code: H

Test End Date/Time: 12/15/16 10:10
Test Number: XML (17-Q4-2016-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: **Pass**
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
12/15/16 09:39	489.000	491.200	-2.200	0.4
12/15/16 09:54	489.000	492.900	-3.900	0.8
12/15/16 10:10	489.000	495.800	-6.800	1.4

Reference Mean: 489.000
Measured Mean: 493.300
Level Error: 0.9
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
12/15/16 09:33	271.900	267.000	4.900	1.8
12/15/16 09:49	271.900	273.800	-1.900	0.7
12/15/16 10:05	271.900	274.900	-3.000	1.1

Reference Mean: 271.900
Measured Mean: 271.900
Level Error: 0.0
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
12/15/16 09:30	0.000	1.300	-1.300	
12/15/16 09:46	0.000	3.600	-3.600	
12/15/16 10:02	0.000	4.800	-4.800	

Reference Mean: 0.000
Measured Mean: 3.233
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: SRUSTACK
Parameter: O2
System ID:
Component ID:
Span Value: 25.000
Span Scale Code: H

Test End Date/Time: 12/15/16 11:15
Test Number: XML (18-Q4-2016-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: **Pass**
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
12/15/16 10:36	0.000	0.000	0.000	
12/15/16 10:49	0.000	0.100	-0.100	
12/15/16 11:04	0.000	0.100	-0.100	

Reference Mean: 0.000
Measured Mean: 0.067
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
12/15/16 10:44	21.400	21.500	-0.100	0.5
12/15/16 10:59	21.400	21.500	-0.100	0.5
12/15/16 11:15	21.400	21.500	-0.100	0.5

Reference Mean: 21.400
Measured Mean: 21.500
Level Error: 0.5
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
12/15/16 10:39	13.100	13.100	0.000	0.0
12/15/16 10:54	13.100	13.100	0.000	0.0
12/15/16 11:09	13.100	13.100	0.000	0.0

Reference Mean: 13.100
Measured Mean: 13.100
Level Error: 0.0
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier: A12011
Cylinder #: ALM062568
Cylinder Exp. Date: 01/02/2021

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: N_H2S
Parameter: N_H2S
Instrument Span: 300.000

Test Date/Time: 09/20/16 11:44
Test Result: **Pass**
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
09/20/16 11:06	262.500	264.000	-1.500	-0.6
09/20/16 11:20	259.700	264.000	-4.300	-1.6
09/20/16 11:35	262.800	264.000	-1.200	-0.5

CEMS Mean (Cm): 261.667
Audit Mean (Ca): 264.000
Accuracy (A) in %: -0.9
Mean Difference: -2.3
APS Indicator: 0
Cylinder #: AAL070357
Cylinder Exp. Date: 04/28/2018

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
09/20/16 11:10	156.700	155.000	1.700	1.1
09/20/16 11:25	154.900	155.000	-0.100	-0.1
09/20/16 11:40	156.700	155.000	1.700	1.1

CEMS Mean (Cm): 156.100
Audit Mean (Ca): 155.000
Accuracy (A) in %: 0.7
Mean Difference: 1.1
APS Indicator: 0
Cylinder #: ALM021059
Cylinder Exp. Date: 01/30/2019

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
09/20/16 11:16	0.000	0.000	0.000	
09/20/16 11:28	0.000	0.000	0.000	
09/20/16 11:44	0.300	0.000	0.300	

CEMS Mean (Cm): 0.100
Audit Mean (Ca): 0.000
Accuracy (A) in %:
Mean Difference: 0.1
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: N_H2S
Parameter: N_H2S
Instrument Span: 300.000

Test Date/Time: 12/13/16 09:58
Test Result: **Pass**
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
12/13/16 09:19	0.000	0.000	0.000	
12/13/16 09:38	0.000	0.000	0.000	
12/13/16 09:58	0.000	0.000	0.000	

CEMS Mean (Cm): 0.000
Audit Mean (Ca): 0.000
Accuracy (A) in %:
Mean Difference: 0.0
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
12/13/16 09:13	151.700	153.000	-1.300	-0.8
12/13/16 09:34	155.600	153.000	2.600	1.7
12/13/16 09:51	154.200	153.000	1.200	0.8

CEMS Mean (Cm): 153.833
Audit Mean (Ca): 153.000
Accuracy (A) in %: 0.5
Mean Difference: 0.8
APS Indicator: 0
Cylinder #: AALO69628
Cylinder Exp. Date: 03/17/2020

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
12/13/16 09:07	263.700	264.000	-0.300	-0.1
12/13/16 09:28	262.700	264.000	-1.300	-0.5
12/13/16 09:47	257.800	264.000	-6.200	-2.3

CEMS Mean (Cm): 261.400
Audit Mean (Ca): 264.000
Accuracy (A) in %: -1.0
Mean Difference: -2.6
APS Indicator: 0
Cylinder #: CC17772
Cylinder Exp. Date: 11/25/2018

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: M_FLARE
Parameter: H2S
Instrument Span: 300.000

Test Date/Time: 08/08/16 10:52
Test Result: **Pass**
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
08/08/16 09:02	148.600	152.000	-3.400	-2.2
08/08/16 09:51	158.100	152.000	6.100	4.0
08/08/16 10:41	148.700	152.000	-3.300	-2.2

CEMS Mean (Cm): 151.800
Audit Mean (Ca): 152.000
Accuracy (A) in %: -0.1
Mean Difference: -0.2
APS Indicator: 0
Cylinder #: ALM063106
Cylinder Exp. Date: 08/21/2016

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
08/08/16 09:13	262.200	266.000	-3.800	-1.4
08/08/16 10:02	271.800	266.000	5.800	2.2
08/08/16 10:52	262.100	266.000	-3.900	-1.5

CEMS Mean (Cm): 265.367
Audit Mean (Ca): 266.000
Accuracy (A) in %: -0.2
Mean Difference: -0.6
APS Indicator: 0
Cylinder #: CC17703
Cylinder Exp. Date: 08/05/2018

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
08/08/16 08:51	1.900	0.000	1.900	
08/08/16 09:40	2.700	0.000	2.700	
08/08/16 10:30	2.000	0.000	2.000	

CEMS Mean (Cm): 2.200
Audit Mean (Ca): 0.000
Accuracy (A) in %:
Mean Difference: 2.2
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: M_FLARE
Parameter: H2SCONC
Instrument Span: 300.000

Test Date/Time: 09/27/16 13:24
Test Result: **Pass**
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
09/27/16 10:16	0.000	0.000	0.000	
09/27/16 11:25	0.000	0.000	0.000	
09/27/16 12:25	0.000	0.000	0.000	

CEMS Mean (Cm): 0.000
Audit Mean (Ca): 0.000
Accuracy (A) in %:
Mean Difference: 0.0
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
09/27/16 10:49	154.700	157.000	-2.300	-1.5
09/27/16 11:44	150.500	157.000	-6.500	-4.1
09/27/16 12:50	153.700	157.000	-3.300	-2.1

CEMS Mean (Cm): 152.967
Audit Mean (Ca): 157.000
Accuracy (A) in %: -2.6
Mean Difference: -4.0
APS Indicator: 0
Cylinder #: AAL18386
Cylinder Exp. Date: 01/30/2019

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
09/27/16 10:59	264.600	263.000	1.600	0.6
09/27/16 12:08	266.600	263.000	3.600	1.4
09/27/16 13:24	264.000	263.000	1.000	0.4

CEMS Mean (Cm): 265.067
Audit Mean (Ca): 263.000
Accuracy (A) in %: 0.8
Mean Difference: 2.1
APS Indicator: 0
Cylinder #: alm009342
Cylinder Exp. Date: 04/02/2019

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: M_FLARE
Parameter: SOLA_TRS
Instrument Span: 300.000

Test Date/Time: 12/08/16 10:43
Test Result: **Pass**
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
12/08/16 09:16	156.300	153.000	3.300	2.2
12/08/16 09:56	157.000	153.000	4.000	2.6
12/08/16 10:34	157.800	153.000	4.800	3.1

CEMS Mean (Cm): 157.033
Audit Mean (Ca): 153.000
Accuracy (A) in %: 2.6
Mean Difference: 4.0
APS Indicator: 0
Cylinder #: ALMO27491
Cylinder Exp. Date: 10/14/2019

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
12/08/16 09:22	251.200	263.000	-11.800	-4.5
12/08/16 10:02	250.900	263.000	-12.100	-4.6
12/08/16 10:43	252.400	263.000	-10.600	-4.0

CEMS Mean (Cm): 251.500
Audit Mean (Ca): 263.000
Accuracy (A) in %: -4.4
Mean Difference: -11.5
APS Indicator: 0
Cylinder #: CC66150
Cylinder Exp. Date: 04/02/2019

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
12/08/16 09:04	0.200	0.000	0.200	
12/08/16 09:44	-0.200	0.000	-0.200	
12/08/16 10:20	0.200	0.000	0.200	

CEMS Mean (Cm): 0.067
Audit Mean (Ca): 0.000
Accuracy (A) in %:
Mean Difference: 0.1
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: M_FLARE
Parameter: H2S
Instrument Span: 300.000

Test Date/Time: 12/08/16 10:44
Test Result: **Pass**
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
12/08/16 09:20	263.700	263.000	0.700	0.3
12/08/16 10:00	262.000	263.000	-1.000	-0.4
12/08/16 10:44	264.100	263.000	1.100	0.4

CEMS Mean (Cm): 263.267
Audit Mean (Ca): 263.000
Accuracy (A) in %: 0.1
Mean Difference: 0.3
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
12/08/16 09:08	1.900	0.000	1.900	
12/08/16 09:44	2.400	0.000	2.400	
12/08/16 10:20	1.800	0.000	1.800	

CEMS Mean (Cm): 2.033
Audit Mean (Ca): 0.000
Accuracy (A) in %:
Mean Difference: 2.0
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
12/08/16 09:12	148.700	153.000	-4.300	-2.8
12/08/16 09:54	147.500	153.000	-5.500	-3.6
12/08/16 10:32	155.300	153.000	2.300	1.5

CEMS Mean (Cm): 150.500
Audit Mean (Ca): 153.000
Accuracy (A) in %: -1.6
Mean Difference: -2.5
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: M_FLARE
Parameter: H2SCONC
Instrument Span: 300.000

Test Date/Time: 12/28/16 11:39
Test Result: **Pass**
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
12/28/16 09:14	0.000	0.000	0.000	
12/28/16 10:06	0.000	0.000	0.000	
12/28/16 11:00	0.000	0.000	0.000	

CEMS Mean (Cm): 0.000
Audit Mean (Ca): 0.000
Accuracy (A) in %:
Mean Difference: 0.0
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
12/28/16 09:31	153.000	157.000	-4.000	-2.5
12/28/16 10:23	153.400	157.000	-3.600	-2.3
12/28/16 11:18	156.600	157.000	-0.400	-0.3

CEMS Mean (Cm): 154.333
Audit Mean (Ca): 157.000
Accuracy (A) in %: -1.7
Mean Difference: -2.7
APS Indicator: 0
Cylinder #: AAL18368
Cylinder Exp. Date: 03/15/2024

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
12/28/16 09:45	271.300	264.000	7.300	2.8
12/28/16 10:42	270.000	264.000	6.000	2.3
12/28/16 11:39	267.800	264.000	3.800	1.4

CEMS Mean (Cm): 269.700
Audit Mean (Ca): 264.000
Accuracy (A) in %: 2.2
Mean Difference: 5.7
APS Indicator: 0
Cylinder #: 1I2319
Cylinder Exp. Date: 02/11/2019

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK
Parameter: SO2
System ID:
Component ID:
Span Value: 100.000
Span Scale Code: H

Test End Date/Time: 09/07/16 08:46
Test Number: XML (29-Q3-2016-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: **Pass**
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
09/07/16 08:15	50.000	48.400	1.600	3.2
09/07/16 08:30	50.000	49.600	0.400	0.8
09/07/16 08:43	50.000	50.000	0.000	0.0

Reference Mean: 50.000
Measured Mean: 49.333
Level Error: 1.3
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #: cc30589
Cylinder Exp. Date: 10/12/2017

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
09/07/16 08:19	87.800	87.700	0.100	0.1
09/07/16 08:34	87.800	88.700	-0.900	1.0
09/07/16 08:46	87.800	88.600	-0.800	0.9

Reference Mean: 87.800
Measured Mean: 88.333
Level Error: 0.6
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #: ALM049052
Cylinder Exp. Date: 04/09/2023

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
09/07/16 08:11	0.000	1.200	-1.200	
09/07/16 08:25	0.000	1.400	-1.400	
09/07/16 08:39	0.000	1.300	-1.300	

Reference Mean: 0.000
Measured Mean: 1.300
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK
Parameter: O2
System ID:
Component ID:
Span Value: 25.000
Span Scale Code: H

Test End Date/Time: 09/07/16 13:17
Test Number: XML (27-Q3-2016-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: **Pass**
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
09/07/16 12:45	0.000	0.000	0.000	
09/07/16 12:57	0.000	0.700	-0.700	
09/07/16 13:09	0.000	0.000	0.000	

Reference Mean: 0.000
Measured Mean: 0.233
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
09/07/16 12:49	13.100	13.100	0.000	0.0
09/07/16 13:01	13.100	13.100	0.000	0.0
09/07/16 13:13	13.100	13.100	0.000	0.0

Reference Mean: 13.100
Measured Mean: 13.100
Level Error: 0.0
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier: A12011
Cylinder #: almo51526
Cylinder Exp. Date: 01/02/2021

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
09/07/16 12:53	22.000	22.100	-0.100	0.5
09/07/16 13:05	22.000	22.100	-0.100	0.5
09/07/16 13:17	22.000	22.100	-0.100	0.5

Reference Mean: 22.000
Measured Mean: 22.100
Level Error: 0.5
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier: A12011
Cylinder #: 1L1856
Cylinder Exp. Date: 07/07/2023

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK
Parameter: CO
System ID:
Component ID:
Span Value: 100.000
Span Scale Code: H

Test End Date/Time: 09/07/16 14:29
Test Number: XML (33-Q3-2016-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: **Pass**
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
09/07/16 14:05	899.000	902.700	-3.700	0.4
09/07/16 14:16	899.000	901.000	-2.000	0.2
09/07/16 14:29	899.000	901.600	-2.600	0.3

Reference Mean: 899.000
Measured Mean: 901.767
Level Error: 0.3
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
09/07/16 14:00	516.000	518.700	-2.700	0.5
09/07/16 14:12	516.000	518.900	-2.900	0.6
09/07/16 14:25	516.000	519.200	-3.200	0.6

Reference Mean: 516.000
Measured Mean: 518.933
Level Error: 0.6
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
09/07/16 13:56	0.000	1.100	-1.100	
09/07/16 14:09	0.000	3.200	-3.200	
09/07/16 14:21	0.000	3.300	-3.300	

Reference Mean: 0.000
Measured Mean: 2.533
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK
Parameter: SO2
System ID:
Component ID:
Span Value: 100.000
Span Scale Code: H

Test End Date/Time: 12/22/16 09:48
Test Number: XML (29-Q4-2016-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: **Pass**
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
12/22/16 09:16	0.000	0.000	0.000	
12/22/16 09:28	0.000	3.000	-3.000	
12/22/16 09:41	0.000	1.600	-1.600	

Reference Mean: 0.000
Measured Mean: 1.533
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
12/22/16 09:20	50.000	48.300	1.700	3.4
12/22/16 09:32	50.000	49.100	0.900	1.8
12/22/16 09:45	50.000	50.200	-0.200	0.4

Reference Mean: 50.000
Measured Mean: 49.200
Level Error: 1.6
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #: cc30589
Cylinder Exp. Date: 10/12/2017

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
12/22/16 09:24	88.600	90.300	-1.700	1.9
12/22/16 09:36	88.600	90.700	-2.100	2.4
12/22/16 09:48	88.600	91.300	-2.700	3.0

Reference Mean: 88.600
Measured Mean: 90.767
Level Error: 2.4
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #: cc124353
Cylinder Exp. Date: 09/17/2024

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK
Parameter: O2
System ID:
Component ID:
Span Value: 25.000
Span Scale Code: H

Test End Date/Time: 12/22/16 12:23
Test Number: XML (27-Q4-2016-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: **Pass**
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
12/22/16 12:02	13.100	13.000	0.100	0.8
12/22/16 12:11	13.100	13.000	0.100	0.8
12/22/16 12:20	13.100	13.000	0.100	0.8

Reference Mean: 13.100
Measured Mean: 13.000
Level Error: 0.8
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier: A12011
Cylinder #: almo51526
Cylinder Exp. Date: 01/02/2021

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
12/22/16 12:05	21.900	21.800	0.100	0.5
12/22/16 12:14	21.900	21.800	0.100	0.5
12/22/16 12:23	21.900	21.800	0.100	0.5

Reference Mean: 21.900
Measured Mean: 21.800
Level Error: 0.5
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #: alm008097
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
12/22/16 11:59	0.000	0.000	0.000	
12/22/16 12:08	0.000	0.100	-0.100	
12/22/16 12:17	0.000	0.100	-0.100	

Reference Mean: 0.000
Measured Mean: 0.067
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK
Parameter: CO
System ID:
Component ID:
Span Value: 1,000.000
Span Scale Code: H

Test End Date/Time: 12/22/16 14:11
Test Number: XML (33-Q4-2016-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: **Pass**
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
12/22/16 13:38	0.000	0.200	-0.200	
12/22/16 13:51	0.000	1.500	-1.500	
12/22/16 14:03	0.000	1.800	-1.800	

Reference Mean: 0.000
Measured Mean: 1.167
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
12/22/16 13:42	516.000	525.500	-9.500	1.8
12/22/16 13:54	516.000	517.000	-1.000	0.2
12/22/16 14:07	516.000	516.900	-0.900	0.2

Reference Mean: 516.000
Measured Mean: 519.800
Level Error: 0.7
APS Indicator: False
Gas Type Code: BALN,CO
Vendor Identifier:
Cylinder #: alm033241
Cylinder Exp. Date: 01/04/2021

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
12/22/16 13:46	901.000	903.400	-2.400	0.3
12/22/16 13:58	901.000	899.400	1.600	0.2
12/22/16 14:11	901.000	895.900	5.100	0.6

Reference Mean: 901.000
Measured Mean: 899.567
Level Error: 0.2
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #: alm044288
Cylinder Exp. Date: 07/14/2023

Attachment 5: Daily Drift Test Results for the FCCU SO2 Analyzer

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line
O2										
07/01/2016 05:58	0.0	-0.1	0.1	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
07/02/2016 05:58	0.0	-0.1	0.1	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
07/03/2016 05:58	0.0	-0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
07/03/2016 09:29	0.0	-0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
07/04/2016 05:58	0.0	-0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
07/05/2016 05:58	0.0	-0.1	0.1	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
07/05/2016 08:06	0.0	-0.1	0.1	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
07/06/2016 05:58	0.0	-0.1	0.1	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
07/07/2016 05:58	0.0	-0.1	0.1	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
07/08/2016 05:58	0.0	-0.1	0.1	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
07/09/2016 05:58	0.0	-0.1	0.1	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
07/10/2016 05:58	0.0	-0.1	0.1	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
07/11/2016 05:58	0.0	-0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
07/12/2016 05:58	0.0	-0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
07/13/2016 05:58	0.0	-0.1	0.1	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
07/14/2016 05:58	0.0	-0.1	0.1	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
07/15/2016 05:58	0.0	-0.1	0.1	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
07/16/2016 05:58	0.0	-0.1	0.1	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
07/17/2016 05:58	0.0	-0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
07/18/2016 05:58	0.0	-0.1	0.1	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
07/19/2016 05:58	0.0	-0.1	0.1	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
07/20/2016 05:58	0.0	-0.1	0.1	21.9	22.2	0.3	1.0	DIFF	Passed	Yes
07/21/2016 05:58	0.0	-0.2	0.2	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
07/22/2016 05:58	0.0	-0.2	0.2	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
07/23/2016 05:58	0.0	-0.2	0.2	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
07/24/2016 05:58	0.0	-0.2	0.2	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
07/25/2016 05:58	0.0	-0.2	0.2	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
07/26/2016 05:58	0.0	-0.2	0.2	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
07/27/2016 05:58	0.0	-0.2	0.2	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
07/28/2016 05:58	0.0	-0.2	0.2	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
07/29/2016 05:58	0.0	-0.2	0.2	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
07/30/2016 05:58	0.0	-0.2	0.2	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
07/31/2016 05:58	0.0	-0.2	0.2	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
08/01/2016 05:58	0.0	-0.2	0.2	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/02/2016 05:58	0.0	-0.2	0.2	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/03/2016 05:58	0.0	-0.2	0.2	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
08/04/2016 05:58	0.0	-0.2	0.2	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
08/05/2016 05:58	0.0	-0.2	0.2	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/06/2016 05:58	0.0	-0.2	0.2	21.9	21.6	0.3	1.0	DIFF	Passed	Yes
08/07/2016 05:58	0.0	-0.2	0.2	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/08/2016 05:58	0.0	-0.2	0.2	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
08/09/2016 05:58	0.0	-0.2	0.2	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/10/2016 05:58	0.0	-0.2	0.2	21.9	22.0	0.1	1.0	DIFF	Passed	Yes

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line
O2										
08/11/2016 05:58	0.0	-0.3	0.3	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/12/2016 05:58	0.0	-0.3	0.3	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
08/13/2016 05:58	0.0	-0.3	0.3	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/13/2016 07:12	0.0	0.0	0.0	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
08/14/2016 05:58	0.0	0.1	0.1	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
08/15/2016 05:58	0.0	0.1	0.1	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
08/16/2016 05:58	0.0	0.1	0.1	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/17/2016 05:58	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
08/18/2016 05:58	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
08/18/2016 07:21	0.0	0.1	0.1	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
08/19/2016 05:57	0.0	0.0	0.0	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/20/2016 05:57	0.0	0.1	0.1	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
08/21/2016 05:57	0.0	0.1	0.1	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
08/22/2016 05:57	0.0	0.1	0.1	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
08/22/2016 08:46	0.0	0.2	0.2	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/23/2016 05:57	0.0	0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
08/24/2016 05:57	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
08/25/2016 05:57	0.0	0.1	0.1	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/26/2016 05:57	0.0	0.1	0.1	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
08/26/2016 07:33	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
08/26/2016 07:58	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
08/27/2016 05:57	0.0	0.0	0.0	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
08/28/2016 05:57	0.0	0.0	0.0	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
08/29/2016 05:57	0.0	0.0	0.0	22.0	22.0	0.0	1.0	DIFF	Passed	Yes
08/30/2016 05:57	0.0	0.0	0.0	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
08/31/2016 05:57	0.0	0.0	0.0	22.0	22.0	0.0	1.0	DIFF	Passed	Yes
09/01/2016 05:57	0.0	0.0	0.0	22.0	21.9	0.1	1.0	DIFF	Passed	Yes
09/02/2016 05:57	0.0	0.0	0.0	22.0	22.0	0.0	1.0	DIFF	Passed	Yes
09/03/2016 05:57	0.0	0.0	0.0	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/03/2016 07:54	0.0	0.0	0.0	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/04/2016 05:57	0.0	0.0	0.0	22.0	22.2	0.2	1.0	DIFF	Passed	Yes
09/05/2016 05:57	0.0	0.0	0.0	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/06/2016 05:57	0.0	0.0	0.0	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/07/2016 05:57	0.0	0.0	0.0	22.0	22.0	0.0	1.0	DIFF	Passed	Yes
09/07/2016 15:31	0.0	-0.1	0.1	22.0	22.0	0.0	1.0	DIFF	Passed	Yes
09/08/2016 06:00	0.0	-0.1	0.1	22.0	22.0	0.0	1.0	DIFF	Passed	Yes
09/09/2016 06:00	0.0	-0.1	0.1	22.0	22.0	0.0	1.0	DIFF	Passed	Yes
09/10/2016 05:59	0.0	-0.1	0.1	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/11/2016 05:59	0.0	-0.1	0.1	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/12/2016 05:59	0.0	-0.1	0.1	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
09/13/2016 05:59	0.0	-0.1	0.1	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
09/13/2016 08:14	0.0	0.0	0.0	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
09/14/2016 05:59	0.0	0.0	0.0	22.0	22.1	0.1	1.0	DIFF	Passed	Yes

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line
O2										
09/15/2016 05:59	0.0	0.0	0.0	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
09/15/2016 07:41	0.0	-0.1	0.1	22.0	22.2	0.2	1.0	DIFF	Passed	Yes
09/16/2016 05:58	0.0	0.0	0.0	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
09/17/2016 05:58	0.0	0.0	0.0	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
09/18/2016 05:58	0.0	-0.1	0.1	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/19/2016 05:58	0.0	-0.1	0.1	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/19/2016 09:01	0.0	-0.1	0.1	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/20/2016 05:58	0.0	-0.1	0.1	22.0	22.2	0.2	1.0	DIFF	Passed	Yes
09/21/2016 05:58	0.0	-0.1	0.1	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/22/2016 05:58	0.0	-0.1	0.1	22.0	21.9	0.1	1.0	DIFF	Passed	Yes
09/23/2016 05:58	0.0	-0.1	0.1	22.0	22.0	0.0	1.0	DIFF	Passed	Yes
09/23/2016 08:24	0.0	-0.1	0.1	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/24/2016 05:58	0.0	-0.1	0.1	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
09/25/2016 05:58	0.0	-0.1	0.1	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
09/26/2016 05:58	0.0	-0.1	0.1	22.0	22.2	0.2	1.0	DIFF	Passed	Yes
09/27/2016 05:58	0.0	-0.1	0.1	22.0	22.0	0.0	1.0	DIFF	Passed	Yes
09/27/2016 07:48	0.0	0.0	0.0	22.0	22.0	0.0	1.0	DIFF	Passed	Yes
09/27/2016 08:58	0.0	0.0	0.0	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
09/28/2016 05:58	0.0	0.0	0.0	22.0	22.2	0.2	1.0	DIFF	Passed	Yes
09/29/2016 05:58	0.0	0.0	0.0	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
09/30/2016 05:58	0.0	0.0	0.0	22.0	22.2	0.2	1.0	DIFF	Passed	Yes
09/30/2016 08:22	0.0	0.0	0.0	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
10/01/2016 05:57	0.0	0.0	0.0	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
10/01/2016 08:10	0.0	0.0	0.0	22.0	22.2	0.2	1.0	DIFF	Passed	Yes
10/02/2016 05:57	0.0	0.0	0.0	22.0	22.2	0.2	1.0	DIFF	Passed	Yes
10/02/2016 12:20	0.0	0.0	0.0	22.0	22.2	0.2	1.0	DIFF	Passed	Yes
10/03/2016 05:58	0.0	0.0	0.0	22.0	22.1	0.1	1.0	DIFF	Passed	Yes
10/04/2016 05:58	0.0	0.0	0.0	22.0	22.2	0.2	1.0	DIFF	Passed	Yes
10/05/2016 05:58	0.0	0.0	0.0	22.0	22.4	0.4	1.0	DIFF	Passed	Yes
10/06/2016 05:58	0.0	0.0	0.0	22.0	22.3	0.3	1.0	DIFF	Passed	Yes
10/06/2016 09:46	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
10/07/2016 05:58	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
10/08/2016 05:58	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
10/09/2016 05:58	0.0	0.0	0.0	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
10/10/2016 05:58	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
10/11/2016 05:58	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
10/11/2016 08:24	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
10/12/2016 05:46	0.0	0.0	0.0	21.9			1.0	DIFF	Error	Yes
10/12/2016 07:26	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
10/13/2016 05:59	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
10/13/2016 08:14	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
10/14/2016 05:56	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
10/15/2016 05:56	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line
O2										
10/15/2016 11:12	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
10/16/2016 05:57	0.0	0.0	0.0	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
10/17/2016 05:57	0.0	0.0	0.0	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
10/18/2016 05:57	0.0	-0.6	0.6	21.9	21.7	0.2	1.0	DIFF	Maint Limit	Yes
10/18/2016 08:18	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
10/19/2016 05:57	0.0	0.0	0.0	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
10/20/2016 05:57	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
10/20/2016 08:41	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
10/21/2016 05:55	0.0	0.0	0.0	21.9	21.5	0.4	1.0	DIFF	Passed	Yes
10/22/2016 05:55	0.0	0.0	0.0	21.9	21.4	0.5	1.0	DIFF	Passed	Yes
10/23/2016 05:55	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
10/24/2016 05:55	0.0	0.0	0.0	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
10/25/2016 05:55	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
10/26/2016 05:55	0.0	0.0	0.0	21.9	22.2	0.3	1.0	DIFF	Passed	Yes
10/27/2016 05:55	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
10/28/2016 05:55	0.0	0.0	0.0	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
10/28/2016 09:17	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
11/02/2016 13:56	0.0	0.0	0.0	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
11/03/2016 05:55	0.0	0.0	0.0	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
11/04/2016 05:55	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
11/04/2016 08:14	0.0	0.0	0.0	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
11/05/2016 05:55	0.0	0.0	0.0	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
11/06/2016 05:55	0.0	0.0	0.0	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
11/07/2016 05:55	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
11/08/2016 05:55	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
11/09/2016 05:55	0.0	0.0	0.0	21.9	21.6	0.3	1.0	DIFF	Passed	Yes
11/09/2016 07:58	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
11/09/2016 08:23	0.0	0.0	0.0	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
11/10/2016 05:55	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
11/11/2016 05:55	0.0	0.0	0.0	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
11/12/2016 05:55	0.0	0.0	0.0	21.9	22.3	0.4	1.0	DIFF	Passed	Yes
11/13/2016 05:55	0.0	0.0	0.0	21.9	22.3	0.4	1.0	DIFF	Passed	Yes
11/14/2016 05:55	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
11/15/2016 05:55	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
11/16/2016 05:55	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
11/17/2016 05:55	0.0	-0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
11/18/2016 05:55	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
11/19/2016 05:55	0.0	-0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
11/20/2016 05:55	0.0	-0.1	0.1	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
11/21/2016 05:55	0.0	-0.1	0.1	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
11/22/2016 05:55	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
11/23/2016 05:55	0.0	-0.1	0.1	21.9	22.3	0.4	1.0	DIFF	Passed	Yes
11/23/2016 11:40	0.0	-0.1	0.1	21.9	22.3	0.4	1.0	DIFF	Passed	Yes

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line
O2										
11/24/2016 05:55	0.0	-0.1	0.1	21.9	22.3	0.4	1.0	DIFF	Passed	Yes
11/24/2016 10:01	0.0	-0.1	0.1	21.9	22.2	0.3	1.0	DIFF	Passed	Yes
11/25/2016 05:55	0.0	-0.1	0.1	21.9	22.2	0.3	1.0	DIFF	Passed	Yes
11/25/2016 10:29	0.0	-0.1	0.1	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
11/26/2016 05:55	0.0	-0.1	0.1	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
11/27/2016 05:55	0.0	-0.1	0.1	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
11/28/2016 05:55	0.0	-0.1	0.1	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
11/29/2016 05:55	0.0	-0.1	0.1	21.9	21.6	0.3	1.0	DIFF	Passed	Yes
11/29/2016 09:14	0.0	-0.1	0.1	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
11/29/2016 14:24	0.0	0.0	0.0	21.9	21.5	0.4	1.0	DIFF	Passed	Yes
11/30/2016 05:55	0.0	0.0	0.0	21.9	21.5	0.4	1.0	DIFF	Passed	Yes
12/01/2016 05:55	0.0	0.0	0.0	21.9	21.4	0.5	1.0	DIFF	Passed	Yes
12/01/2016 10:56	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
12/02/2016 05:55	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
12/03/2016 05:55	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
12/04/2016 05:55	0.0	0.0	0.0	21.9	22.3	0.4	1.0	DIFF	Passed	Yes
12/05/2016 05:55	0.0	0.0	0.0	21.9	22.2	0.3	1.0	DIFF	Passed	Yes
12/05/2016 10:20	0.0	0.0	0.0	21.9	22.2	0.3	1.0	DIFF	Passed	Yes
12/06/2016 05:55	0.0	0.0	0.0	21.9	22.3	0.4	1.0	DIFF	Passed	Yes
12/06/2016 09:00	0.0	0.0	0.0	21.9	22.2	0.3	1.0	DIFF	Passed	Yes
12/07/2016 05:55	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
12/08/2016 05:55	0.0	0.1	0.1	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
12/09/2016 05:55	0.0	0.1	0.1	21.9	22.2	0.3	1.0	DIFF	Passed	Yes
12/10/2016 05:55	0.0	0.1	0.1	21.9	22.4	0.5	1.0	DIFF	Passed	Yes
12/11/2016 05:55	0.0	0.1	0.1	21.9	22.6	0.7	1.0	DIFF	Maint Limit	Yes
12/12/2016 05:55	0.0	0.1	0.1	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
12/13/2016 05:55	0.0	0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
12/14/2016 05:55	0.0	0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
12/15/2016 05:55	0.0	0.0	0.0	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
12/16/2016 05:55	0.0	0.1	0.1	21.9	22.4	0.5	1.0	DIFF	Passed	Yes
12/17/2016 05:55	0.0	0.1	0.1	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
12/18/2016 05:55	0.0	0.1	0.1	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
12/19/2016 05:55	0.0	0.1	0.1	21.9	22.7	0.8	1.0	DIFF	Maint Limit	Yes
12/20/2016 05:55	0.0	0.1	0.1	21.9	22.6	0.7	1.0	DIFF	Maint Limit	Yes
12/21/2016 05:55	0.0	0.1	0.1	21.9	22.3	0.4	1.0	DIFF	Passed	Yes
12/21/2016 13:28	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes
12/22/2016 05:55	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
12/22/2016 14:33	0.0	0.0	0.0	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
12/23/2016 05:55	0.0	0.0	0.0	21.9	22.3	0.4	1.0	DIFF	Passed	Yes
12/24/2016 05:55	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
12/25/2016 05:55	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes
12/26/2016 05:55	0.0	0.0	0.0	21.9	22.3	0.4	1.0	DIFF	Passed	Yes
12/27/2016 05:55	0.0	0.0	0.0	21.9	21.7	0.2	1.0	DIFF	Passed	Yes

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line
O2										
12/28/2016 05:55	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes
12/29/2016 05:55	0.0	0.0	0.0	21.9	21.7	0.2	1.0	DIFF	Passed	Yes
12/30/2016 05:55	0.0	0.0	0.0	21.9	21.6	0.3	1.0	DIFF	Passed	Yes
12/31/2016 05:55	0.0	0.0	0.0	21.9	21.9	0.0	1.0	DIFF	Passed	Yes
SO2										
07/01/2016 05:50	0.0	-2.1	2.1	87.9	87.0	0.9	4.0	DIFF	Passed	Yes
07/02/2016 05:50	0.0	-1.1	1.1	87.9	87.8	0.1	4.0	DIFF	Passed	Yes
07/03/2016 05:50	0.0	-3.5	3.5	87.9	79.7	8.2	4.0	DIFF	Failed	Yes
07/03/2016 09:22	0.0	-0.2	0.2	87.9	86.1	1.8	4.0	DIFF	Passed	Yes
07/04/2016 05:50	0.0	0.7	0.7	87.9	90.8	2.9	4.0	DIFF	Maint Limit	Yes
07/05/2016 05:50	0.0	3.9	3.9	87.9	93.1	5.2	4.0	DIFF	Failed	Yes
07/05/2016 07:58	0.0	0.1	0.1	87.9	90.2	2.3	4.0	DIFF	Passed	Yes
07/06/2016 05:50	0.0	0.0	0.0	87.9	89.7	1.8	4.0	DIFF	Passed	Yes
07/07/2016 05:50	0.0	0.4	0.4	87.9	88.9	1.0	4.0	DIFF	Passed	Yes
07/08/2016 05:50	0.0	0.2	0.2	87.9	86.8	1.1	4.0	DIFF	Passed	Yes
07/09/2016 05:50	0.0	0.6	0.6	87.9	89.2	1.3	4.0	DIFF	Passed	Yes
07/10/2016 05:50	0.0	1.1	1.1	87.9	90.5	2.6	4.0	DIFF	Maint Limit	Yes
07/11/2016 05:50	0.0	-2.7	2.7	87.9	85.0	2.9	4.0	DIFF	Maint Limit	Yes
07/12/2016 05:50	0.0	-1.7	1.7	87.9	88.1	0.2	4.0	DIFF	Passed	Yes
07/13/2016 05:50	0.0	-0.1	0.1	87.9	89.2	1.3	4.0	DIFF	Passed	Yes
07/14/2016 05:50	0.0	1.9	1.9	87.9	87.9	0.0	4.0	DIFF	Passed	Yes
07/15/2016 05:50	0.0	0.7	0.7	87.9	90.1	2.2	4.0	DIFF	Passed	Yes
07/16/2016 05:50	0.0	0.7	0.7	87.9	89.0	1.1	4.0	DIFF	Passed	Yes
07/17/2016 05:50	0.0	0.3	0.3	87.9	86.7	1.2	4.0	DIFF	Passed	Yes
07/18/2016 05:50	0.0	0.0	0.0	87.9	90.0	2.1	4.0	DIFF	Passed	Yes
07/19/2016 05:50	0.0	1.1	1.1	87.9	89.4	1.5	4.0	DIFF	Passed	Yes
07/20/2016 05:50	0.0	-2.6	2.6	87.9	87.4	0.5	4.0	DIFF	Maint Limit	Yes
07/21/2016 05:50	0.0	-1.4	1.4	87.9	89.3	1.4	4.0	DIFF	Passed	Yes
07/22/2016 05:50	0.0	0.3	0.3	87.9	88.5	0.6	4.0	DIFF	Passed	Yes
07/23/2016 05:50	0.0	0.3	0.3	87.9	89.3	1.4	4.0	DIFF	Passed	Yes
07/24/2016 05:50	0.0	0.9	0.9	87.9	90.9	3.0	4.0	DIFF	Maint Limit	Yes
07/25/2016 05:50	0.0	0.7	0.7	87.9	90.3	2.4	4.0	DIFF	Passed	Yes
07/26/2016 05:50	0.0	1.9	1.9	87.9	91.0	3.1	4.0	DIFF	Maint Limit	Yes
07/27/2016 05:50	0.0	1.3	1.3	87.9	90.8	2.9	4.0	DIFF	Maint Limit	Yes
07/28/2016 05:50	0.0	0.3	0.3	87.8	88.5	0.7	4.0	DIFF	Passed	Yes
07/29/2016 05:50	0.0	1.7	1.7	87.8	91.0	3.2	4.0	DIFF	Maint Limit	Yes
07/30/2016 05:50	0.0	2.0	2.0	87.8	91.6	3.8	4.0	DIFF	Maint Limit	Yes
07/31/2016 05:50	0.0	2.4	2.4	87.8	90.9	3.1	4.0	DIFF	Maint Limit	Yes
08/01/2016 05:50	0.0	2.0	2.0	87.8	91.2	3.4	4.0	DIFF	Maint Limit	Yes
08/02/2016 05:50	0.0	2.7	2.7	87.8	91.5	3.7	4.0	DIFF	Maint Limit	Yes
08/03/2016 05:50	0.0	1.9	1.9	87.8	90.6	2.8	4.0	DIFF	Maint Limit	Yes
08/04/2016 05:50	0.0	-0.7	0.7	87.8	90.0	2.2	4.0	DIFF	Passed	Yes
08/05/2016 05:50	0.0	-0.4	0.4	87.8	89.7	1.9	4.0	DIFF	Passed	Yes

Calibration Error: **Failed Test** | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line
SO2										
08/06/2016 05:50	0.0	1.0	1.0	87.8	90.0	2.2	4.0	DIFF	Passed	Yes
08/07/2016 05:50	0.0	0.9	0.9	87.8	88.4	0.6	4.0	DIFF	Passed	Yes
08/08/2016 05:50	0.0	-0.4	0.4	87.8	89.5	1.7	4.0	DIFF	Passed	Yes
08/09/2016 05:50	0.0	1.0	1.0	87.8	89.7	1.9	4.0	DIFF	Passed	Yes
08/10/2016 05:50	0.0	1.4	1.4	87.8	90.7	2.9	4.0	DIFF	Maint Limit	Yes
08/11/2016 05:50	0.0	2.4	2.4	87.8	91.3	3.5	4.0	DIFF	Maint Limit	Yes
08/12/2016 05:50	0.0	3.1	3.1	87.8	91.5	3.7	4.0	DIFF	Maint Limit	Yes
08/13/2016 05:50	0.0	3.1	3.1	87.8	92.3	4.5	4.0	DIFF	Failed	Yes
08/13/2016 07:04	0.0	1.3	1.3	87.8	89.0	1.2	4.0	DIFF	Passed	Yes
08/14/2016 05:50	0.0	-0.6	0.6	87.8	89.3	1.5	4.0	DIFF	Passed	Yes
08/15/2016 05:50	0.0	-1.0	1.0	87.8	89.8	2.0	4.0	DIFF	Passed	Yes
08/16/2016 05:50	0.0	-0.7	0.7	87.8	90.0	2.2	4.0	DIFF	Passed	Yes
08/17/2016 05:50	0.0	-0.4	0.4	87.8	88.6	0.8	4.0	DIFF	Passed	Yes
08/18/2016 05:50	0.0	-1.1	1.1	87.8	83.6	4.2	4.0	DIFF	Failed	Yes
08/18/2016 07:13	0.0	0.9	0.9	87.8	88.6	0.8	4.0	DIFF	Passed	Yes
08/19/2016 05:49	0.0	-0.1	0.1	87.8	88.5	0.7	4.0	DIFF	Passed	Yes
08/20/2016 05:49	0.0	-0.1	0.1	87.8	88.4	0.6	4.0	DIFF	Passed	Yes
08/21/2016 05:49	0.0	-0.3	0.3	87.8	87.2	0.6	4.0	DIFF	Passed	Yes
08/22/2016 05:49	0.0	0.6	0.6	87.8	88.8	1.0	4.0	DIFF	Passed	Yes
08/22/2016 08:38	0.0	-0.1	0.1	87.8	86.2	1.6	4.0	DIFF	Passed	Yes
08/23/2016 05:49	0.0	-3.2	3.2	87.8	85.4	2.4	4.0	DIFF	Maint Limit	Yes
08/24/2016 05:49	0.0	-0.2	0.2	87.8	89.4	1.6	4.0	DIFF	Passed	Yes
08/25/2016 05:49	0.0	1.7	1.7	87.8	91.3	3.5	4.0	DIFF	Maint Limit	Yes
08/26/2016 05:49	0.0	3.8	3.8	87.8	91.7	3.9	4.0	DIFF	Maint Limit	Yes
08/26/2016 07:25	0.0	1.4	1.4	87.8	88.6	0.8	4.0	DIFF	Passed	Yes
08/26/2016 07:50	0.0	0.6	0.6	87.8	88.3	0.5	4.0	DIFF	Passed	Yes
08/27/2016 05:49	0.0	-0.7	0.7	87.8	87.2	0.6	4.0	DIFF	Passed	Yes
08/28/2016 05:49	0.0	-0.8	0.8	87.8	86.5	1.3	4.0	DIFF	Passed	Yes
08/29/2016 05:49	0.0	-0.1	0.1	87.8	87.6	0.2	4.0	DIFF	Passed	Yes
08/30/2016 05:49	0.0	-1.5	1.5	87.8	85.2	2.6	4.0	DIFF	Maint Limit	Yes
08/31/2016 05:49	0.0	-0.5	0.5	87.8	87.4	0.4	4.0	DIFF	Passed	Yes
09/01/2016 05:49	0.0	0.5	0.5	87.8	87.3	0.5	4.0	DIFF	Passed	Yes
09/02/2016 05:49	0.0	-1.6	1.6	87.8	86.3	1.5	4.0	DIFF	Passed	Yes
09/03/2016 05:49	0.0	-2.5	2.5	87.8	81.8	6.0	4.0	DIFF	Failed	Yes
09/03/2016 07:46	0.0	1.3	1.3	87.8	88.1	0.3	4.0	DIFF	Passed	Yes
09/04/2016 05:49	0.0	-0.7	0.7	87.8	87.0	0.8	4.0	DIFF	Passed	Yes
09/05/2016 05:49	0.0	-1.4	1.4	87.8	87.2	0.6	4.0	DIFF	Passed	Yes
09/06/2016 05:49	0.0	-2.0	2.0	87.8	86.1	1.7	4.0	DIFF	Passed	Yes
09/07/2016 05:49	0.0	0.1	0.1	87.8	88.4	0.6	4.0	DIFF	Passed	Yes
09/07/2016 15:20	0.0	-0.2	0.2	87.8	86.8	1.0	4.0	DIFF	Passed	Yes
09/08/2016 05:49	0.0	1.7	1.7	87.8	86.8	1.0	4.0	DIFF	Passed	Yes
09/09/2016 05:49	0.0	2.7	2.7	87.8	91.1	3.3	4.0	DIFF	Maint Limit	Yes
09/10/2016 05:49	0.0	2.6	2.6	87.8	89.5	1.7	4.0	DIFF	Maint Limit	Yes

Calibration Error: **Failed Test** | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line
SO2										
09/11/2016 05:49	0.0	2.6	2.6	87.8	90.4	2.6	4.0	DIFF	Maint Limit	Yes
09/12/2016 05:49	0.0	-1.2	1.2	87.8	87.5	0.3	4.0	DIFF	Passed	Yes
09/13/2016 05:49	0.0	-1.4	1.4	87.8	79.8	8.0	4.0	DIFF	Failed	Yes
09/13/2016 08:03	0.0	-1.2	1.2	88.6	90.1	1.5	4.0	DIFF	Passed	Yes
09/14/2016 05:48	0.0	-1.7	1.7	88.6	88.5	0.1	4.0	DIFF	Passed	Yes
09/15/2016 05:48	0.0	-2.6	2.6	88.6	84.3	4.3	4.0	DIFF	Failed	Yes
09/15/2016 07:30	0.0	-0.1	0.1	88.6	91.2	2.6	4.0	DIFF	Maint Limit	Yes
09/16/2016 05:47	0.0	-0.6	0.6	88.6	90.8	2.2	4.0	DIFF	Passed	Yes
09/17/2016 05:48	0.0	0.4	0.4	81.3	79.7	1.6	4.0	DIFF	Passed	Yes
09/18/2016 05:48	0.0	1.9	1.9	81.3	83.9	2.6	4.0	DIFF	Maint Limit	Yes
09/19/2016 05:48	0.0	6.6	6.6	81.3	88.3	7.0	4.0	DIFF	Failed	Yes
09/19/2016 08:51	0.0	1.5	1.5	81.3	83.4	2.1	4.0	DIFF	Passed	Yes
09/20/2016 05:48	0.0	1.7	1.7	81.3	84.3	3.0	4.0	DIFF	Maint Limit	Yes
09/21/2016 05:48	0.0	1.1	1.1	81.3	83.1	1.8	4.0	DIFF	Passed	Yes
09/22/2016 05:48	0.0	-3.3	3.3	81.3	80.6	0.7	4.0	DIFF	Maint Limit	Yes
09/23/2016 05:48	0.0	-4.2	4.2	81.3	79.1	2.2	4.0	DIFF	Failed	Yes
09/23/2016 08:15	0.0	2.0	2.0	81.3	82.8	1.5	4.0	DIFF	Passed	Yes
09/24/2016 05:48	0.0	0.1	0.1	81.3	83.4	2.1	4.0	DIFF	Passed	Yes
09/25/2016 05:48	0.0	-1.9	1.9	81.3	82.1	0.8	4.0	DIFF	Passed	Yes
09/26/2016 05:48	0.0	-2.0	2.0	81.3	80.1	1.2	4.0	DIFF	Passed	Yes
09/27/2016 05:48	0.0	-1.7	1.7	81.3	66.2	15.1	4.0	DIFF	Failed	Yes
09/27/2016 07:38	0.0	-0.8	0.8	81.3	81.5	0.2	4.0	DIFF	Passed	Yes
09/27/2016 08:49	0.0	-1.3	1.3	81.3	81.5	0.2	4.0	DIFF	Passed	Yes
09/28/2016 05:48	0.0	-2.0	2.0	81.3	81.2	0.1	4.0	DIFF	Passed	Yes
09/29/2016 05:48	0.0	-1.6	1.6	81.3	81.6	0.3	4.0	DIFF	Passed	Yes
09/30/2016 05:48	0.0	-1.8	1.8	81.3	68.8	12.5	4.0	DIFF	Failed	Yes
09/30/2016 08:12	0.0	0.0	0.0	81.3	83.5	2.2	4.0	DIFF	Passed	Yes
10/01/2016 05:47	0.0	-0.9	0.9	81.3	74.0	7.3	5.0	DIFF	Failed	Yes
10/01/2016 08:00	0.0	2.9	2.9	81.3	79.0	2.3	5.0	DIFF	Maint Limit	Yes
10/02/2016 05:47	0.0	-2.8	2.8	81.3	70.6	10.7	5.0	DIFF	Failed	Yes
10/02/2016 12:10	0.0	-0.8	0.8	81.3	79.0	2.3	5.0	DIFF	Passed	Yes
10/03/2016 05:48	0.0	-1.0	1.0	81.3	80.3	1.0	5.0	DIFF	Passed	Yes
10/04/2016 05:48	0.0	-1.8	1.8	81.3	79.4	1.9	5.0	DIFF	Passed	Yes
10/05/2016 05:48	0.0	-2.4	2.4	81.3	81.1	0.2	5.0	DIFF	Passed	Yes
10/06/2016 05:48	0.0	-2.5	2.5	81.3	79.2	2.1	5.0	DIFF	Passed	Yes
10/06/2016 09:36	0.0	-0.2	0.2	81.3	82.6	1.3	5.0	DIFF	Passed	Yes
10/07/2016 05:48	0.0	-0.7	0.7	81.3	82.5	1.2	5.0	DIFF	Passed	Yes
10/08/2016 05:48	0.0	-0.1	0.1	81.3	82.0	0.7	5.0	DIFF	Passed	Yes
10/09/2016 05:48	0.0	1.0	1.0	81.3	84.0	2.7	5.0	DIFF	Maint Limit	Yes
10/10/2016 05:48	0.0	1.1	1.1	81.3	83.5	2.2	5.0	DIFF	Passed	Yes
10/11/2016 05:48	0.0	0.1	0.1	81.3	85.9	4.6	5.0	DIFF	Maint Limit	Yes
10/11/2016 08:14	0.0	1.2	1.2	88.6	88.7	0.1	5.0	DIFF	Passed	Yes
10/12/2016 05:44	0.0	-1.0	1.0	88.6	-1.0	89.6	5.0	DIFF	Failed	Yes

Calibration Error: **Failed Test** | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line
SO2										
10/12/2016 07:18	0.0	-0.3	0.3	88.6	87.2	1.4	5.0	DIFF	Passed	Yes
10/13/2016 05:51	0.0	-1.5	1.5	88.6	84.1	4.5	5.0	DIFF	Maint Limit	Yes
10/13/2016 08:06	0.0	0.3	0.3	88.6	91.0	2.4	5.0	DIFF	Passed	Yes
10/14/2016 05:48	0.0	-0.2	0.2	88.6	90.4	1.8	5.0	DIFF	Passed	Yes
10/15/2016 05:48	0.0	-0.2	0.2	88.6	33.3	55.3	5.0	DIFF	Failed	Yes
10/15/2016 11:04	0.0	1.6	1.6	88.6	91.1	2.5	5.0	DIFF	Passed	Yes
10/16/2016 05:49	0.0	0.2	0.2	88.6	86.7	1.9	5.0	DIFF	Passed	Yes
10/17/2016 05:49	0.0	0.7	0.7	88.6	88.6	0.0	5.0	DIFF	Passed	Yes
10/18/2016 05:49	0.0	0.7	0.7	88.6	95.0	6.4	5.0	DIFF	Failed	Yes
10/18/2016 08:10	0.0	2.5	2.5	88.6	91.2	2.6	5.0	DIFF	Maint Limit	Yes
10/19/2016 05:49	0.0	2.2	2.2	88.6	87.9	0.7	5.0	DIFF	Passed	Yes
10/20/2016 05:49	0.0	2.7	2.7	88.6	93.9	5.3	5.0	DIFF	Failed	Yes
10/20/2016 08:33	0.0	0.8	0.8	88.6	90.2	1.6	5.0	DIFF	Passed	Yes
10/21/2016 05:47	0.0	1.8	1.8	88.6	88.2	0.4	5.0	DIFF	Passed	Yes
10/22/2016 05:47	0.0	1.5	1.5	88.6	90.3	1.7	5.0	DIFF	Passed	Yes
10/23/2016 05:47	0.0	0.5	0.5	88.6	92.8	4.2	5.0	DIFF	Maint Limit	Yes
10/24/2016 05:47	0.0	0.1	0.1	88.6	90.3	1.7	5.0	DIFF	Passed	Yes
10/25/2016 05:47	0.0	0.0	0.0	88.6	92.6	4.0	5.0	DIFF	Maint Limit	Yes
10/26/2016 05:47	0.0	-0.5	0.5	88.6	92.6	4.0	5.0	DIFF	Maint Limit	Yes
10/27/2016 05:47	0.0	-0.8	0.8	88.6	91.2	2.6	5.0	DIFF	Maint Limit	Yes
10/28/2016 05:47	0.0	-0.1	0.1	88.6	82.0	6.6	5.0	DIFF	Failed	Yes
10/28/2016 09:09	0.0	0.3	0.3	88.6	89.3	0.7	5.0	DIFF	Passed	Yes
11/02/2016 13:48	0.0	-0.1	0.1	88.6	89.3	0.7	5.0	DIFF	Passed	Yes
11/03/2016 05:47	0.0	1.1	1.1	88.6	88.3	0.3	5.0	DIFF	Passed	Yes
11/04/2016 05:47	0.0	0.3	0.3	88.6	73.5	15.1	5.0	DIFF	Failed	Yes
11/04/2016 08:06	0.0	2.4	2.4	88.6	90.8	2.2	5.0	DIFF	Passed	Yes
11/05/2016 05:47	0.0	-1.0	1.0	88.6	92.2	3.6	5.0	DIFF	Maint Limit	Yes
11/06/2016 05:47	0.0	-1.3	1.3	88.6	92.5	3.9	5.0	DIFF	Maint Limit	Yes
11/07/2016 05:47	0.0	-1.2	1.2	88.6	92.5	3.9	5.0	DIFF	Maint Limit	Yes
11/08/2016 05:47	0.0	-1.7	1.7	88.6	92.4	3.8	5.0	DIFF	Maint Limit	Yes
11/09/2016 05:47	0.0	-1.4	1.4	88.6	93.4	4.8	5.0	DIFF	Maint Limit	Yes
11/09/2016 07:50	0.0	-0.2	0.2	88.6	89.3	0.7	5.0	DIFF	Passed	Yes
11/09/2016 08:15	0.0	0.5	0.5	88.6	88.9	0.3	5.0	DIFF	Passed	Yes
11/10/2016 05:47	0.0	0.0	0.0	88.6	85.5	3.1	5.0	DIFF	Maint Limit	Yes
11/11/2016 05:47	0.0	-0.3	0.3	88.6	88.3	0.3	5.0	DIFF	Passed	Yes
11/12/2016 05:47	0.0	-0.1	0.1	88.6	89.1	0.5	5.0	DIFF	Passed	Yes
11/13/2016 05:47	0.0	-0.7	0.7	88.6	91.4	2.8	5.0	DIFF	Maint Limit	Yes
11/14/2016 05:47	0.0	-0.6	0.6	88.6	89.7	1.1	5.0	DIFF	Passed	Yes
11/15/2016 05:47	0.0	0.0	0.0	88.6	89.5	0.9	5.0	DIFF	Passed	Yes
11/16/2016 05:47	0.0	-0.7	0.7	88.6	89.5	0.9	5.0	DIFF	Passed	Yes
11/17/2016 05:47	0.0	-0.3	0.3	88.6	84.8	3.8	5.0	DIFF	Maint Limit	Yes
11/18/2016 05:47	0.0	-0.1	0.1	88.6	89.5	0.9	5.0	DIFF	Passed	Yes
11/19/2016 05:47	0.0	0.2	0.2	88.6	90.6	2.0	5.0	DIFF	Passed	Yes

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line
SO2										
11/20/2016 05:47	0.0	-1.2	1.2	88.6	88.0	0.6	5.0	DIFF	Passed	Yes
11/21/2016 05:47	0.0	-2.3	2.3	88.6	85.8	2.8	5.0	DIFF	Maint Limit	Yes
11/22/2016 05:47	0.0	-1.9	1.9	88.6	88.0	0.6	5.0	DIFF	Passed	Yes
11/23/2016 05:47	0.0	-2.8	2.8	88.6	88.7	0.1	5.0	DIFF	Maint Limit	Yes
11/23/2016 11:32	0.0	0.1	0.1	88.6	89.7	1.1	5.0	DIFF	Passed	Yes
11/24/2016 05:47	0.0	-0.9	0.9	88.6	84.2	4.4	5.0	DIFF	Maint Limit	Yes
11/24/2016 09:53	0.0	-0.4	0.4	88.6	89.1	0.5	5.0	DIFF	Passed	Yes
11/25/2016 05:47	0.0	-0.9	0.9	88.6	91.5	2.9	5.0	DIFF	Maint Limit	Yes
11/25/2016 10:21	0.0	-0.2	0.2	88.6	89.1	0.5	5.0	DIFF	Passed	Yes
11/26/2016 05:47	0.0	-1.3	1.3	88.6	86.5	2.1	5.0	DIFF	Passed	Yes
11/27/2016 05:47	0.0	-3.0	3.0	88.6	87.8	0.8	5.0	DIFF	Maint Limit	Yes
11/28/2016 05:47	0.0	-3.8	3.8	88.6	86.4	2.2	5.0	DIFF	Maint Limit	Yes
11/29/2016 05:47	0.0	-4.4	4.4	88.6	81.5	7.1	5.0	DIFF	Failed	Yes
11/29/2016 09:06	0.0	1.0	1.0	88.6	86.5	2.1	5.0	DIFF	Passed	Yes
11/29/2016 14:16	0.0	1.0	1.0	88.6	89.2	0.6	5.0	DIFF	Passed	Yes
11/30/2016 05:47	0.0	1.2	1.2	88.6	88.8	0.2	5.0	DIFF	Passed	Yes
12/01/2016 05:47	0.0	1.3	1.3	88.6	84.5	4.1	5.0	DIFF	Maint Limit	Yes
12/01/2016 10:48	0.0	0.4	0.4	88.6	89.9	1.3	5.0	DIFF	Passed	Yes
12/02/2016 05:47	0.0	-1.0	1.0	88.6	89.9	1.3	5.0	DIFF	Passed	Yes
12/03/2016 05:47	0.0	-0.3	0.3	88.6	85.7	2.9	5.0	DIFF	Maint Limit	Yes
12/04/2016 05:47	0.0	-1.1	1.1	88.6	90.6	2.0	5.0	DIFF	Passed	Yes
12/05/2016 05:47	0.0	-0.8	0.8	88.6	88.5	0.1	5.0	DIFF	Passed	Yes
12/05/2016 10:12	0.0	-1.0	1.0	88.6	89.0	0.4	5.0	DIFF	Passed	Yes
12/06/2016 05:47	0.0	-1.1	1.1	88.6	89.5	0.9	5.0	DIFF	Passed	Yes
12/06/2016 08:52	0.0	-1.1	1.1	88.6	90.6	2.0	5.0	DIFF	Passed	Yes
12/07/2016 05:47	0.0	-1.2	1.2	88.6	89.5	0.9	5.0	DIFF	Passed	Yes
12/08/2016 05:47	0.0	-1.2	1.2	88.6	89.2	0.6	5.0	DIFF	Passed	Yes
12/09/2016 05:47	0.0	-1.5	1.5	88.6	89.7	1.1	5.0	DIFF	Passed	Yes
12/10/2016 05:47	0.0	-1.5	1.5	88.6	90.2	1.6	5.0	DIFF	Passed	Yes
12/11/2016 05:47	0.0	-1.9	1.9	88.6	90.9	2.3	5.0	DIFF	Passed	Yes
12/12/2016 05:47	0.0	-1.6	1.6	88.6	88.6	0.0	5.0	DIFF	Passed	Yes
12/13/2016 05:47	0.0	-1.4	1.4	88.6	89.0	0.4	5.0	DIFF	Passed	Yes
12/14/2016 05:47	0.0	-2.1	2.1	88.6	89.3	0.7	5.0	DIFF	Passed	Yes
12/15/2016 05:47	0.0	-2.3	2.3	88.6	87.8	0.8	5.0	DIFF	Passed	Yes
12/16/2016 05:47	0.0	-2.9	2.9	88.6	85.0	3.6	5.0	DIFF	Maint Limit	Yes
12/17/2016 05:47	0.0	-2.7	2.7	88.6	87.9	0.7	5.0	DIFF	Maint Limit	Yes
12/18/2016 05:47	0.0	-2.3	2.3	88.6	85.8	2.8	5.0	DIFF	Maint Limit	Yes
12/19/2016 05:47	0.0	-1.9	1.9	88.6	91.5	2.9	5.0	DIFF	Maint Limit	Yes
12/20/2016 05:47	0.0	-2.3	2.3	88.6	89.1	0.5	5.0	DIFF	Passed	Yes
12/21/2016 05:47	0.0	-2.3	2.3	88.6	84.8	3.8	5.0	DIFF	Maint Limit	Yes
12/21/2016 13:20	0.0	0.2	0.2	88.6	90.8	2.2	5.0	DIFF	Passed	Yes
12/22/2016 05:47	0.0	-0.5	0.5	88.6	89.7	1.1	5.0	DIFF	Passed	Yes
12/22/2016 14:25	0.0	-0.3	0.3	88.6	90.0	1.4	5.0	DIFF	Passed	Yes

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 07/01/2016 00:00 Through 12/31/2016 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line
SO2										
12/23/2016 05:47	0.0	-0.4	0.4	88.6	90.6	2.0	5.0	DIFF	Passed	Yes
12/24/2016 05:47	0.0	-0.1	0.1	88.6	90.1	1.5	5.0	DIFF	Passed	Yes
12/25/2016 05:47	0.0	0.6	0.6	88.6	88.7	0.1	5.0	DIFF	Passed	Yes
12/26/2016 05:47	0.0	-0.1	0.1	88.6	91.8	3.2	5.0	DIFF	Maint Limit	Yes
12/27/2016 05:47	0.0	0.3	0.3	88.6	87.3	1.3	5.0	DIFF	Passed	Yes
12/28/2016 05:47	0.0	0.4	0.4	88.6	90.3	1.7	5.0	DIFF	Passed	Yes
12/29/2016 05:47	0.0	0.2	0.2	88.6	88.6	0.0	5.0	DIFF	Passed	Yes
12/30/2016 05:47	0.0	-0.8	0.8	88.6	87.8	0.8	5.0	DIFF	Passed	Yes
12/31/2016 05:47	0.0	-0.7	0.7	88.6	89.1	0.5	5.0	DIFF	Passed	Yes

Calibration Error: **Failed Test** Failed Level Maintenance Limit